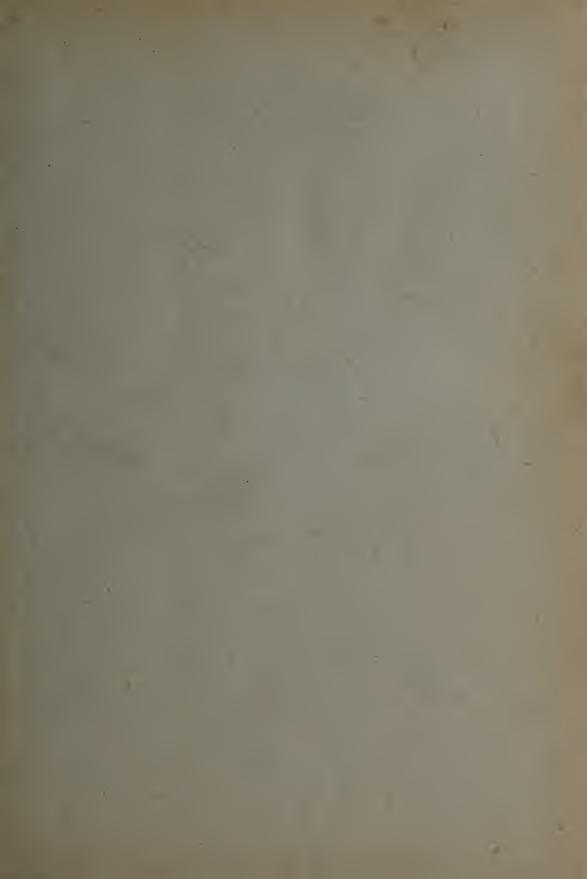
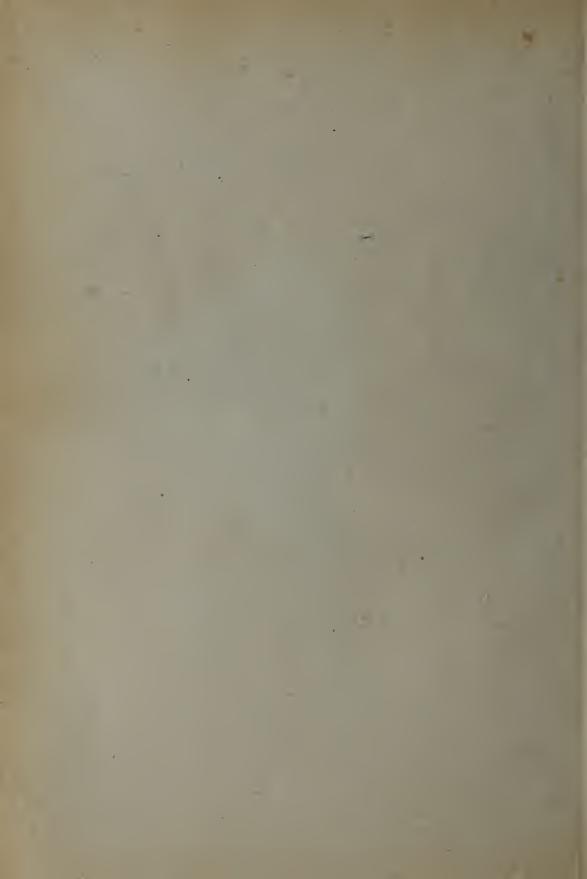
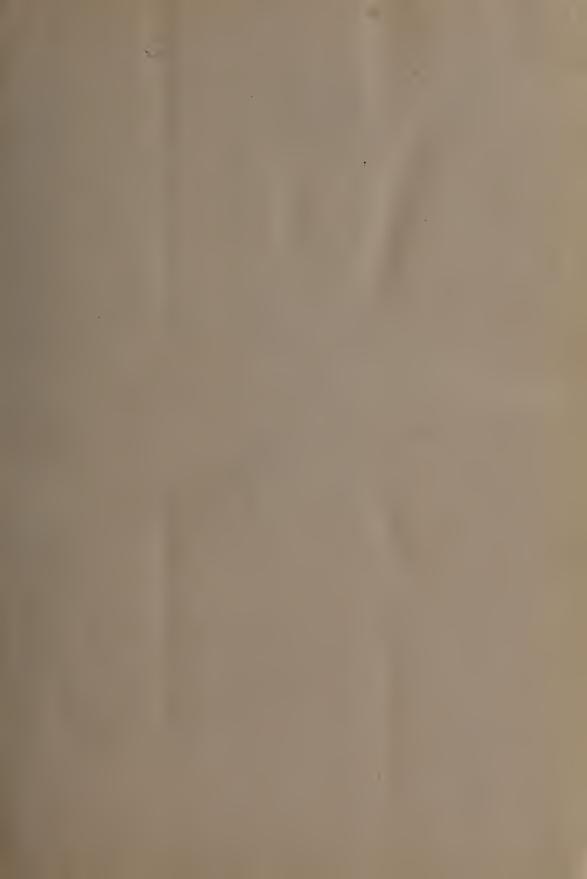


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FORTY-THIRD ANNUAL SESSION—ARCADIA—MAY 10-12, 1916

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ORIGINAL ARTICLES

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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume II

St. Augustine and Jacksonville, Florida, July, 1915

Number 1

ORIGINAL ARTICLES

CANCER OF THE PROSTATE.

RAYMOND C. TURCK, M. D., F. A. C. S.,

Surgeon to St. Luke's Hospital,

Jacksonville, Fla.

While it is generally definitely understood that cancer of the prostate is the terminal result in twenty per cent of cases of nonoperated benign prostatic hypertrophy within three years after the commencement of catheter life, it is probable that the percentage is still greater, since many cases of prostatic disease die without definite knowledge as to whether the prostatic enlargement is benign or malignant, and many die of intercurrent diseases, with cancerous change in its incipiency, and before positive symptoms of malignancy have been observed. As a matter of fact, often, prostatic cancer is positively recognized only in the operating room or in the pathologic laboratory after operation. It is not always possible to recognize prostatic carcinoma either at operation or by careful microscopic examination of the tissue. Frequently, carcinomatous changes are found in a part of the gland only, hence sections from certain parts of a gland may appear, microscopically, to be benign, while others are distinctly malignant. The complete and permanent cure of prostatic cancer by operation or by any means whatsoever, after the disease is definitely established, is entirely problematical, if not absolutely improbable. Hence, we are, in such cases, faced with the proposition, applicable to cancer in general, that the time to cure cancer of the prostate is before cancer begins. Once cancer is apparent enough for pre-operative diagnosis, the case is hopeless—operative work but hastens the end.

The title of this paper is, perhaps, misleading, since an academic discussion of the pathology, symptoms, diagnosis and treatment of prostatic carcinoma is, to my mind, almost a useless waste of time, so far as practical value is concerned; scientific interest alone being involved. It is well of course to keep in mind the obvious signs of advanced prostatic cancer, such as local metastases, involvement of bladder and seminal vesicles and enlargement of lymph glands, since often times a hopeless, harmful or useless operation may be avoided, and in this connection, it were well to refuse operation on inoperable cases, since every such case lost adds to the popular fear of prostatectomy and will frighten and prevent many suitable benign cases from accepting early operative relief and cure.

The profession in general, and lavmen in particular, are all too prone to consider the dangers of benign prostatectomy from their knowledge of operative deaths in malignant, or, late stage, septic, exhausted benign types, thus, so far as operation is concerned, making one unfair, prognostic classification of all types, instead of classifying cases properly, into (a) early, benign types in which operative mortality is less than two per cent, and (b) advanced, aged, septic cases and malignant cases in which the operative mortality is more than forty per cent within six months after op-The etiology and prognosis of malignant prostatic disease are worthy of most careful and thoughtful consideration. Etiology may be summed up in one para-Carcinoma of the prostate is never a primary disease, it is always secondary to a benign hypertrophy and usually follows catheter irritation of tissue.

As to prognosis, it is but fair to state, that early, malignant cases often have from six months to five years of comparatively comfortable life following competent operation, though the death rate, immediate and within the first six months, is more than fifty per cent. Extensive statistics show that the average length of life of patients with prostatic cancer, after the beginning of the disease, is but thirteen months, if not operated.

As to the termination of benign prostatic hypertrophy without operation, it has been definitely proven that at least twenty per cent (and probably more than that) will die of cancer, "fifty per cent will die within five years from the onset of obstructive symptoms where catheter life is not necessary. The beginning of catheter life shortens this expectation of life almost fifty per cent (two years and eight months), and increases mortality to sixty-six and two-thirds per cent within the shortened period." (Squier.)

As has been stated before, there is an unfounded dread, among the profession and laymen, of the operation for removal of the prostate. This is due, largely to the facts, that in the past the operative mortality in even ordinary cases has been admittedly high, and that at present in reckless or incompetent hands it is still high. Long operations in one stage, operations by inexperienced surgeons, operations on hopelessly advanced cases and on malignant types, all elevate the mortality percentage and foster and nourish the widespread fear of surgical intervention.

But few procedures have been so markedly improved in performance and final results as prostatectomy. Perfections in technique, in pre-operative preparation, in anesthesia, in reduction of operative time, in instruments, reduced the mortality of the one-stage operation—either perineal or suprapubic—to less than eight per cent. In spite of these improvements, in spite of every

care, indeed, in cases of, apparently, the most brilliant and successful and easy operations, there were unaccountable deaths. It was finally determined that these deaths were due to a reflex disturbance or unbalancing of renal function, the result of sudden relief from obstruction, or free outflow, or back pressure of urine. The two-stage procedure eliminated this danger, and as a result the immediate operative mortality in all types of benign cases is now less than three per cent.

Today the first procedure is a supra-pubic cystostomy, under local anesthesia, with no shock, no danger, no great systemic disturbance. The prostate is not touched: nothing is done other than to remove calculi, if any, and if not imbedded. drainage tube, preferably a Pezzer catheter, is inserted in the bladder for continuous drainage; the bladder is irrigated daily, and if septic, argyrol, protargol, or silver nitrate is instilled. Within a week or ten days renal function has re-established its equilibrium, the bladder is clean and the patient is ready for the second step—the actual removal of the hypertrophied prostate.

In prostatectomy, particularly in the aged, rapidity of work, elimination of shock, control of hemorrhage and reduction of anesthesia to a minimum are essential to success. A hypodermic injection of morphine and atrophine, or morphine and scopolamin is given a half hour before operation. The patient is brought to the operating room, as quietly and with as little disturbance as possible, every effort is made to eliminate excitement and shock; noise, exhibition of instruments, rattling of pitchers, instruments and basins are prohibited, conversation is limited to the operator and he should speak only in a low, confident, cheerful monotone. The patient should enter the operating room drowsy and content. The bladder is entered by simply enlarging the existing cystostomy incision, and this is done with local anesthesia. A circle of skin, at least an inch away from the existing incision in each direction, is infiltrated with novocain solution. The deeper tissues are then blocked with novocain solution all around the operative area; the needle passing downard through the anesthetized skin. The bladder is then filled, through the drainage tube, with a solution of alvpin, or cocaine. After the local anesthesia is complete, the opening into the bladder is enlarged sufficiently to easily admit the fore-At this point light gas-oxygen anesthesia is begun, and continued during the enucleation of the prostate. The old method of incising the vesical mucosa. elevating the prostate and dissecting it out is altogether dangerous and obsolete. The forefinger should enter the urethra. and break through where the lateral lobes meet, one lobe is then rapidly swept out of its capsule and turned up into the bladder. The finger then sweeps behind the median lobe, the other lateral lobe is freed, and the whole gland tipped back into the bladder, or each lobe may be loosened and delivered separately. No cutting is usually necessary. The cone-shaped cavity thus left is lined with a thin laver of prostatic tissue; the ejaculatory ducts are uninjured. Hemorrhage is usually slight, certainly no more than can be easily controlled by light packing. This procedure should never require more than thirty minutes, often the whole period of gas anesthesia is not more than fifteen minutes. As soon as the enucleation is completed, general anesthesia is discontinued, the balance of the work being done in the locally anesthetized area. Drainage by Pezzer catheter is instituted.

The patient is awake before the work is completed, there is almost never shock or nausea, and nourishment may be begun at once.

Successful prostatectomy involves, the recovery of the patient, the healing of the

wound within a reasonable time—two to five weeks—with no persisting urinary fistula and with perfect control of bladder without incontinence or obstruction. Barring complications, this result is obtained in ninety-seven per cent of benign cases.

The dangers of operation in advanced malignancy are multiplied by the longer time required for operation, with consequent increase in shock, difficulty of enucleation, liability of injury to bladder or adjacent structures and hemorrhage.

THE CANCER PROBLEM.*

J. KNOX SIMPSON, M. D., *Gynecologist to St. Luke's Hospital*,

Jacksonville, Fla.

Members of the Florida State Nurses' Association:

It is frequently your privilege as nurses to guide your friends and clientele into harbors of safety concerning their health, by giving them sound and judicious advice concerning minor ailments about which they consult you. This privilege while entailing a great responsibility on your part, offers you a wonderful opportunity for disseminating accurate knowledge of the world's great health problems; and it is concerning one of the greatest of these problems, the cancer problem, that I wish to speak to you today.

The enormity of the cancer situation is plainly apparent when you consider some of the facts in the case. Seventy-five thousand people die in the United States every year from cancer. One woman in every eight, one man in every fourteen who lives to be forty years of age, dies a cancer death. Think of that! No race nor social level is exempt from its ravages. It takes its victims in the prime of life, at the very zenith of their career, at the age when they are of

^{*}Read by invitation before the third annual meeting of the Florida State Association of Graduate Nurses, at Jacksonville, Fla., March 4-6, 1915.

most constructive benefit to their families, to their business and to their communities. It is of greater frequency at ages over forty, than tuberculosis, pneumonia or typhoid fever. It is *the* great menace to the health of the adult world today.

What is cancer? What is being done, and what can be done to lessen the enormous toll of human life which it yearly exacts from society?

While the enormous amount of money, of time, and of scientific brains, which have been spent in searching for the cause of cancer have not revealed the actual activating cause, still they have been productive of a vast deal of information concerning the nature of cancerous growths, the conditions leading up to cancer, and the best methods of treatment to pursue in eradicting the disease.

In answer to the first question: what is cancer? You know that layers of epithelial cells cover the entire body, and form the lining membrane of all its organs. These cells in health live, grow, and reproduce their kind, in perfect order and harmony; adhering to the laws of nature, and doing their work smoothly, under the guidance of the central governing centers of the body. When a group of these cells in any location in the body cease to maintain their orderly existence and begin to break the laws of nature; to rapidly proliferate, rapidly degenerate, to work inharmoniously; to live as it were in a state of communistic infelicity. interfering with and invading the surrounding tissues; this group of cells ceases to be a useful component part of the organism, and becomes instead an immediate menace to the surrounding tissues, and an impending menace to the life of its host. It becomes a cancer. The cells grow in riotous profusion, adhering to no known laws of regulation nor inhibition; spreading in every direction, and destroying the tissues in their path.

After a varying length of time, these cells, not content with their 10cal destructive

powers, get into the circulation and seek new fields in which to establish new colonies for carrying on their nefarious practice. This is called metastasis; and when it occurs it closes forever the doors of hope of a cure; and places the indelible stamp of inoperable upon the disease.

What causes these cells to take on this vicious type of growth? We do not know what the immediate cause is. It may be a germ, it may be a parasite, it may be either the entrance into the body of something which will stimulate the cells to this abnormal growth, or the loss from the body of some inhibitory influence which, up to the time of its loss, has prevented the abnormal growth.

There are however certain things which we do know concerning the beginning of cancer, which every one should know. We know that normal cells covering a normal or healthy area in the body rarely become cancerous. We know that abnormal cells covering an unhealthy area of the body frequently become cancerous. We know that unhealthy spots in the body, areas of chronic inflammation, areas subjected to prolonged or repeated irritation, are the spots upon which cancer develops. These areas offer a constant invitation to, and a fertile soil for, the beginning of cancer. In support of this assertion I will mention a few well-known instances.

The occurrence of cancerous degeneration of warts and moles, especially in locations where they are constantly irritated.

Cancer of the tongue and lips in men, from the irritation of a pipe or cigar.

Cancer of the inside of the cheek in the natives of India from the constant sucking of betel nuts.

Cancer of the groin in sailors from sliding down ropes.

Cancer of the abdominal walls of the natives of Kashmir from carrying charcoal stoves next to the abdomen.

Cancer of the cervix in women from childbirth, old tears and chronic inflammation.

The fact that 70% of the cancers of the stomach begin in the base of a chronic ulcer.

Cancer of the gall bladder, following the prolonged presence of gall stones.

Cancer of the breast in women from frequently repeated traumatism.

These facts at once suggest the answer to my second question: what can we do to lessen the enormous yearly mortality from cancer? The answer is: Give the public the benefit of our knowledge of the danger signals of the disease; and emphasize to them the dangers of leaving unnoticed these outstanding invitations of the body to the development of cancer. Of not only allowing them to be accepted by the cancer, but of allowing the growth, which is at first a local one, to remain until it has metastasized before seeking relief. The situation is in a few words contained in the motto of the American Society for the Control of Cancer: "In the early treatment of cancer lies the hope of cure."

At the present time 90% of the individuals developing cancer die of the disease. This is a frightful mortality for a curable disease; and cancer is a curable disease. Curable and preventable. Curable by complete removal in its early stages, while it is still a local growth; preventable by removing its precursors, the diseased spots of the body, before they become cancerous.

There are many reasons for the high mortality of cancer, not by any means the least important of which is the lack of realization on the part of the public of the importance of recognizing pre-cancerous lesions, and the danger of allowing them to remain unmolested.

Statistics gathered in Pennsylvania in 1913 by J. M. Wainwright, chairman of the cancer commission of the state, show the following significant facts:

Out of four hundred cases reported to the commission 30% of the superficial cancers,

and 52% of the deep seated ones were inoperable when first seen by a surgeon. The superficial lesions had been present, and their presence known to their hosts for an average period of 18 months; and the deep ones had produced symptoms of their presence for fourteen months before a surgeon was consulted.

Do you think that of those 400 unfortunate people, one-third of those having superficial cancers and one-half of those having deep-seated ones, would have deliberately waited until they were past hope of surgical relief, before consulting a surgeon, had they realized the danger of waiting, and the absolute necessity of the early removal of the growths? Most assuredly not. They had everything to lose, and nothing to gain by wasting those precious 14 to 18 months, waiting to see what would happen to the growth. They waited because of an inherent dread of an operation, and because of a lack of knowledge of the danger of pursuing a waiting course. Note the difference in results of the cases operated upon early and late in the course of the disease. Of the cases of cancer of the breast operated upon in the Johns Hopkins Hospital since 1889, 80% of those which were still local growths, and had not spread to the axillary lymph glands, were cured; while only 25% of those which had spread to the lymphatics were cured.

If all women knew that fact, and knew also that 80% of the lumps in the breast of women past 35 years of age are cancer to begin with; and that 10% of the remainder will become cancer if left alone; then it would not be necessary to tell them to consult a competent surgeon as soon as the lump is discovered, they would do so of their own free will.

It is the hope and purpose of the American Society for the Control of Cancer to make these and similar facts known to the public; and it is your privilege and your

duty as nurses to acquire and make known to others this information.

A knowledge on your part of the import of the following simple facts concerning the disease will enable you to give the best possible advice to those seeking it, at the best possible time; and may be the means of preventing some of you, or some of your friends from entering the ranks of the fatal 75,000.

First: Do not discount the importance of seemingly trivial things, such as warts, moles, scabs, unhealed ulcers and unhealed sores. They are not painful, and cause very few if any annoying symptoms, but if they remain, and are the seat of constant irritation, they are a constant invitation to the beginning of cancer. Therefore they should be removed when the removal is a matter of a few moments' time and no inconvenience.

Second: Lumps appearing in any part of the body are never normal, and should always be shown to a competent physician if they remain more than a few weeks. The fact that such lumps are painless should never make one feel that they are harmless, for cancer is almost never painful in the early curable stage. Not a day should be lost after discovery, before consulting a surgeon about the significance of a lump in the breast.

Third: Persistent discharge from any part of the body, especially if bloody or irritating to the parts, should be subjected to immediate investigation concerning the cause. In women, a discharge of watery bloody fluid from the nipple may be the only symptom of cancer of the breast. In cancer of the uterus frequently the first and only noticeable warning of its presence is a vaginal discharge; particularly of the following characteristics:

- a. Increase in amount of discharge.
- b. Change in character of a slight discharge which has been present a considerable length of time, to one which is bloody,

watery and foul odored, or irritating to the parts.

c. Any increased menstrual flow, irregular menstrual flow, or return of bleeding after the change of life.

Fourth: The danger signals of cancer of the stomach and intestines are: Indigestion with rapid loss of weight, vomiting of undigested food and the passage of blood from the rectum.

Fifth: Prompt recognition of the signs of beginning cancer, and prompt removal by the knife, offer as rewards: a minor operation, little inconvenience, slight expense, and the best possible hope of permanent cure. Delayed recognition of those signs; and waiting until there is no doubt about the diagnosis of cancer, before consulting a surgeon offer as rewards: a dangerous mutilating operation, prolonged stay in a hospital, enormous loss of time and money, and a very slight chance of cure.

Is there any doubt in your mind; can there be any doubt in any one's mind about the safest and best policy to pursue?

THE ORGANIZATION OF NATIONAL AND LOCAL FORCES IN THE CAMPAIGN AGAINST CANCER.

CURTIS E. LAKEMAN,

Executive Secretary American Society for the Control of Cancer.

New York.

The American Society for the Control of Cancer has recently urged that every state medical society take an active part in arranging meetings and in spreading among all members of the profession the latest knowledge of malignant disease. At the suggestion of the Cancer Committee of the Pennsylvania State Medical Society, many journals will devote their July issues to this subject. It has been pointed out that the American Society for the Control of Cancer might take this timely opportunity to state

its view of the relations between the various bodies which are concerned in this campaign. The suggestion is welcome. If indeed a clear understanding can be reached as to the most effective division of functions and duties among the various organizations, national, state and local, interested in this subject, a long step will have been taken toward the conquest of malignant disease, insofar as that ideal can be approached by the practical application of present knowledge.

The National Society.

The American Society for the Control of Cancer sets up no claim of priority or originality in preaching to the public the necessity of early recognition and treatment of this disease. The organization was effected under the inspiration of numerous similar movements in this country and in Europe. From the first it has been inspired only by a sincere ambition to co-ordinate all existing forces into a single irresistible nationwide effort to reduce the cancer death rate by imparting the necessary knowledge and inspiring the will to believe and act upon Those who direct the policy of the society have no illusions that they are "called" above others to this task. They firmly believe that all sincere workers should unite in a single well considered national movement. If the present society fails to meet the requirements of such a movement it must give place to some agency that will do so, leading the campaign against malignant disease with as conspicuous ability and success as the National Association for the Study and Prevention of Tuberculosis has directed the war on consumption.

Relations to the Professional Societies.

While the Cancer Society found its first impulse in the work of a committee of the American Gynecological Society, the movement was broadened at its very inception by the appointment of organizing delegates

from the American Surgical Association, the American Dermatological Association, the Association of Pathologists and Bacteriologists and practically all the similar special organizations which met in Washington in May, 1913, as the Congress of American Physicians and Surgeons. Definitely launched in New York on May 22, 1913, the movement received within a few months the official endorsement of the American Medical Association, the Clinical Congress of Surgeons, the Western and the Southern Surgical and Gynecological Societies and a number of sectional and state organizations. All these professional bodies have endorsed the design of the National Cancer Society as expressed in its Constitution:

"To disseminate knowledge concerning the symptoms, diagnosis, treatment and prevention of cancer, to investigate the conditions under which cancer is found and to compile statistics in regard thereto."

Relation to Cancer Research.

It will be seen that this purpose comprises not only the conduct of an educational campaign but the gathering of information in regard to this disease. In what relation, then, does the Society stand to the various American Cancer research institutions and workers? The answer is that the Society does not contemplate the prosecution or support of biological research, already so ably pursued under the auspices of our leading universities. With these workers in the field of pure science mutually helpful relations have developed. Indeed a notable collective expression of their attitude is regarded as a very corner stone of the educational movement. A few years ago the eminent laboratory students placed on record in the transactions of their official organization, the American Association for Cancer Research, their conviction that pending the discovery of the ultimate nature and cause of cancer, a far more effective dissemination and utilization of the vast store of present knowledge of the disease is

urgently called for. Formed to carry out this very object the "Control" Society depends upon the constant support and cooperation of the institutions represented in the "Research" Society. Many of the foremost American students of cancer are prominent in the membership of both organizations. Machinery is thus provided for the wider dissemination among the profession and the people of the essence of the newest knowledge of malignant disease, fresh from its laboratory sources.

Relation to Statistical Investigations.

The Society does, however, contemplate original work in the collection and collation of statistical data, and will expand this feature of its program as fast as its resources permit. The statistics of cancer mortality need to be improved both as regards their collection and their publication. The merest suggestion by the Society to the United States Census Bureau has been sufficient to initiate a notable advance in this respect. With the greatest possible interest and zeal, Mr. Harris, the late Director of the Census, and his successor, Mr. Rogers, have undertaken the preparation of a special report on the cancer mortality of the United States Registration Area in 1914. The number of deaths will be stated in full detail under some thirty titles of organs and parts of the body affected, instead of, as hitherto, merely under the six general groups of the International List. The Imperial Cancer Research Fund has long urged that it is only on the basis of such detailed data for the various organs that a true conclusion can be reached as to whether or not cancer is increasing. For the first time in the United States the data will now be at hand, as it is in England and Wales through the reports of the Registrar-General, for the prosecution of such inquiries.

The Census Bureau will also for the first time in this study make a distinction between returns based on certain and on doubtful diagnosis. To secure the additional information needed for this distinction the Bureau is sending tens of thousands of letters to physicians who have certified deaths from cancer asking whether the diagnosis was based on clinical findings alone or was established by surgical intervention, microscopical examination, or autopsy.

All this, it will be realized, is a large amount of work for even a government bureau to undertake. Much of it should be done in the first place by the registration offices and the boards of health of the several states, where the original certificates of death are filed. It will be the duty of the American Society for the Control of Cancer to urge upon the various state officials the need of undertaking this work in order to insure the permanence of the advance in the statistical study of cancer which has been inaugurated by the Census Bureau.

But the Society is also interested in special statistical studies of the geographical, racial and occupational distribution of cancer, and above all in collating, upon a uniform plan, the records of surgical treatment of the disease in the leading hospitals. It is important that an authoritative answer be available for all who ask just what percentage of success is to be expected in the treatment of each phase and each stage of this multiform disease. All such studies the Society regards as fulfilling its fundamental purpose and in pursuing them it is everywhere receiving the most cordial encouragement and assistance from statistical offices and from the best hospitals and institutions.

Relation to Educational Agencies.

The important and clearly established lessons derived from such studies of the sources of information must be given to the public. The Society has undertaken to do this directly, through its publications, its regular articles for the newspapers and its lectures. But in the large view it can best secure this object by enlisting the co-opera-

tion of all appropriate existing agencies which conduct educational work. Foremost among these are the state and local departments of health, especially those which are devoting an increasing share of their energies to the spreading of the gospel of health by bulletins, exhibits and lectures. In the same category must be included the committees on public instruction which in many states are conducting admirable campaigns of health education under the auspices of the state medical societies. Toward all these agencies the Society stands in the relation of the "producing" to the "distributing" end of a manufacturing business. With its wide outlook over the national field it is in a strong position to provide statistical material, to receive and pass on new knowledge, new experiences, new methods which have been found valuable in one field and should be used in others. In another view the Society may take the position of "middleman" between the research workers and statistical students producing new facts about cancer at the sources of knowledge on the one hand, and on the other the many agencies, general and local, which will bring the practical bearings of this knowledge, new and old, directly home to the people. In general, then, one of the most useful functions of the Society is to act as a bureau of information and clearing house which is at the service of all workers and institutions interested in the study and control of cancer.

Relation to State Committees.

The relation of the National Society to similar movements within the various states should be clear from what has been said. In no case will the Society seek to set up local agencies to parallel work already adequately organized under the auspices of state medical societies and boards of health. Provision is made for local committees to be organized under the supervision of the resident directors of the National Society wherever no state or local agency is in a

position to undertake the work. Such groups will not be formed, however, except under full agreement with present state agencies. Where, as in Pennsylvania, under Dr. Wainwright, and similarly under the auspices of state medical societies in Maine, Wisconsin, Kansas, Colorado, Louisiana, Texas and many other states, active local committees are at work, every effort will be made to assist these groups in the manner already outlined and so far as the constitutional limits of size permit to secure from them representative delegates to the governing council of the National Society. At least one director from each state will eventually be chosen to act as a local correspondent who will inspire and stimulate work in his own state while at the same time assisting in formulating the general policies of the National Society.

Relation to other General Committees.

It is an earnest of the good feeling and harmony with which the cancer campaign is evolving toward a single coherent national movement to consider the high degree of integration with other national agencies which has already been attained. Some of these had begun effective work long before the present Society was established. Aside from such admirable local campaigns as that of the Pennsylvania Commission and the work inspired by Dr. J. H. Carstens in Michigan, the Clinical Congress of Surgeons of North America had in the field an active Committee on Cancer under the chairmanship of Dr. Thomas S. Cullen of Baltimore, the other members being Dr. F. F. Simpson of Pittsburgh and Dr. Howard C. Taylor of New York. This Committee, as is well known, caused the publication of widely read and influential popular articles by Samuel Hopkins Adams. It is instanced merely as indicative of the get-together spirit that animates the National Society that all three of these men naturally took their places as members of the Executive Council of the new association. Subsequently the American Medical Association appointed a Cancer Committee representing its Council on Health and Public Instruction, and again to avoid duplication of effort the same men were made members of that Committee. Dr. Frederick R. Green, the capable executive of this Council of the American Medical Association, has been from the first a director of the Cancer Society, and has given invaluable advice and co-operation in its publicity campaign, printing every week in the press bulletin of the A. M. A., a popular article on cancer prepared by the Society, which thereby reaches 3,000 or more editors in all parts of the country.

A similar identity of committees has been effected in local fields, especially in Minnesota, and is typical of the desire to carry on everywhere a well-co-ordinated national campaign which shall embrace representation from all the principal local agencies and shall thus move forward with absolute harmony and unity of purpose to the accomplishment of its difficult but glorious ideal—the progressive reduction of the mortality from this historic scourge of mankind.

CANCER OF THE STOMACH: ITS DIAGNOSIS.*

John E. Boyd, M. D., Jacksonville, Fla.

The profession has known of the disease, "Cancer of the Stomach," for a great number of years, but strange to relate, in the face of advancement in diagnosis in almost every other known disease comparatively small progress has been made in the recognition of this death-dealing malady early enough to offer the patient or his family any hope of a cure. We must accept the statement of eminent authorities that gastric cancer is curable early in the disease.

It is not my purpose in this paper to

rehash in detail the well-established symptoms, because when these present themselves so that the merest tyro could recognize the disease, it is forever too late and the individual is already doomed.

A great deal is being said and written by the profession here lately regarding this disease, not because they are telling anything new, but because some men have awakened to the fact that as guardians of the public health it is right and just, as well as a duty, that the profession as a whole be taught in detail their responsibility on this vital question and that the public at large be taught the necessity of seeking professional advice earlier regarding gastro-intestinal disturbances, no matter how slight, especially after reaching middle age.

The doctor who satisfies himself today with writing a prescription for the person seeking his advice for "indigestion" without a conscientious and careful examination is neglectful of his duty to that person and is injuring his own prospects for success, because if that person is not relieved he is liable to seek another doctor and in case this time he receives a careful examination he is fully aroused to the fact that the other doctor either grossly neglected him or was ignorant. Once the general public is educated then woe betide the physician who has neglected his opportunities.

I wish to impress the fact that it is still and always will be in the hands of the family physician to first recognize the necessity for a careful and exhaustive examination, therefore he should familiarize himself with the precursory grumblings and if unfamiliar with the details or so situated as not to be able to demand expert help, insist on his patient going to someone who is competent.

Of prime importance is the history of the case, the anamesis; a consideration of the patient's general history, and especially his gastric history as told by the patient in his or her own way. It is necessary that the physician be able to recognize the important

^{*}Read in a symposium on cancer, before the Duval County Medical Society, February, 1915.

points in this history so as to separate the wheat from the chaff and mass it together as a part of the important testimony. The burden of proof should rest on the physician to as near as possible disprove the existence of cancer and failing to do this, his duty to that patient is clear.

All statistics unfailingly point to age as of prime importance and while cancer of the stomach has been known to develop in young adults, more than three-fourths of all cases occur between the ages of 40 and 70 years.

Two distinct groups of cases are met with—the one class who date their stomach symptoms over a number of years—the other with a stomach history absolutely free from any symptoms up to a short time prior to their consulting a physician.

Clinicians are commencing to lay much stress on the relationship between many cases of stomach cancer bearing previous histories of gastric ulcer. Smithies (1) of Chicago reviews the subject carefully in the Journal of the A. M. A. It is not intended to infer that all gastric ulcers assume at some time cancerous degeneration, but statistics are piling up to prove that many cases of cancer give a history with a previous symptom-complex indicating ulcer of the stomach. Smithies, in reviewing 566 cases of proved cancer of the stomach from the Mayo clinic, states that 239 or 41.8% fall into the "cancer-followingulcer" classification. Pathologists admit a "Ulcus Carcinomatosum"-something different from primary cancer which ulcerates later, but the difference is not explained. Up to date it exists as an isolated entity unexplained as to its existence and without any prophecy as to its future course. Now, Smithies further states that of the 239 "cancer-following-ulcer cases," 105 or 43.9% showed at laparotomy cancerous ulcers. The significance of this must be clear to any thoughtful physician when he is consulted by a patient between the ages of 40 and 70 years, yielding a history of previous stomach ulcer, especially if recent loss of weight is added to such a history. Smithies goes on further to state that of the 183 cases of the 566, proved cancer series with a clinical history of primary carcinoma, "Ulcus Carcinomosum" was demonstrated in 28 or 15.8%.

Having called your attention to the necessity for careful consideration of all cases consulting you for so-called "indigestion" and emphasizing the importance in their bearing on malignancy of age and loss of weight; also giving you the benefit of the stress now being laid on a pre-cancerous history of ulcer, I will discuss briefly the separate symptoms and diagnostic methods with special reference to their significance in early diagnosis.

Anorexia. According to most authorities, appetite is lost while thirst is increased in 75 to 80 per cent of all cases. A large number of these cases show a particular aversion to meats, but this may not always be characteristic, for an aversion to all solid foods might exist simultaneously. This loss of appetite may be due to the fear of distress after eating or it may be central, however, it, as a rule, exists as an early symptom.

Eructation. This is practically always a late symptom as it is due to stagnation and decomposition which, of course, does not supervene until the disease has encroached on the stomach sufficiently to materially interfere with its motor function.

Pain. Actual pain is a late symptom as a rule, but complaint of a feeling of heaviness, bloating or indescribable distress after eating is not uncommon in the early stages. There is nothing characteristic about it and it becomes important only as a part of the chain of symptoms presented. Usually when actual pain exists, the diagnosis no longer presents any difficulties and all hope of cure is gone. Some cases present themselves with no complaint of pain or even distress.

Vomiting. While vomiting is common, it is by no means the rule, and as a rule, when present, is not an early symptom. At times nausea and a slight regurgitation of bad tasting sour fluid may be complained of as an early symptom, but even this may be absent until late in the disease or not present at all. Vomiting is most frequent in involvement of the orifices and less frequent when only the posterior wall, the curvatures or the body of the stomach is affected. It occurs in about four-fifths of all cases at sometime if the disease is allowed to pursue its course.

Hemorrhage. Vomiting of blood occurs in about one-half of all cases and may be in a clear state; mixed with the contents of the stomach; large or small in amount. Blood in macroscopic amounts usually indicates an advanced stage of the disease. Once established, the bleeding is usually quite constant and differs in that respect from the hemorrhage in gastric ulcer which is usually intermittent. Occult blood has a more important bearing as an early symptom and should always be most carefully sought for. Melena is not a common occurrence.

Constipation. As a rule the bowels are constipated, but this has no special bearing on an early diagnosis. At times a diarrhœa alternates with the constipation and very frequently a colliquative diarrhœa is a precursor of the end.

Fever. This symptom is not present in all cases and is always a late one when it is. It is usually continuous after showing, although it may be of an intermittent type. Its presence has been ascribed to continuous absorption from an ulcered surface; to an effect on the heat centres by the carcinoma toxins or to actual inflammation about the neoplasm.

Condition of the Blood. Ordinarily there is a decrease in the red blood cells, which may fall to as low as 1,500,000; and the hemoglobin may be as low as 50 per cent. The fact that the decrease in the number of

red blood cells is hardly ever as low as it is in pernicious anæmia has a differential diagnostic significance in these two diseases. The leucocytes at times are increased to 15,000 but hardly ever more.

Edema. In a certain percentage of cases, a moderate amount of malleolar edema may be present in the early stages. The rule, however, is for it to appear as a late symptom when it generally presents as an anasarca.

Cache.ria. This symptom is present in all cases of cancer and as a rule shows early in the case. At first the faint lemon-yellowish tint is apt to be overlooked by a careless observer as it may be confused with hepatogenous jaundice, however, to the careful diagnostician it bears a marked significance when considered in connection with the other evidence. Later on when the skin becomes of a waxy, tanned color, it is almost pathognomonic, though of no particular value from the standpoint of cure on account of the advanced state of the disease.

Tumor. At one time it was thought that a palpable tumor in the stomach with a general symptomatology pointing to malignancy relegated that particular case to the inoperable class. This state of affairs no longer applies. While it is still acknowiedged that tumors of the cardia, lesser curvature and posterior wall of the stomach are beyond recognition by the examining land, expert palpation is now recognizing with much accuracy growths of the pylorus, anterior wall, and most of the greater curvature, when still of moderate size and well within the limits of a radical removal. Any one can readily see that this symptom has its limitations and one cannot afford to lay much stress on a negative palpation, but on the other hand a positive finding should not be accepted as a final judgment of "too late," in fact it should add weight to the importance of an exploratory incision. Much depends on the method of palpation. Deep inspiration may cause a growth of the pylorus or of the curvature without adheKing has a very pretty theory that cancer is due to the impregnation of cervical epithelial cells by the spermatazooa. He takes advantage of the fact that most cancers are post climacteric and says that the spermatazooa attacks and fecundates the cervical epithelial cells at this time in lieu of an ovum. His theory would sound more probable if the large majority of cancers were tubal rather than cervical and it seems to me that this theory would do more credit to Mark Twain than to a medical man.

To my mind the best of these theories is that of Carr which depends upon three premises, namely:

- 1. The destruction or alteration of the normal nerve control of the cells by injury or disease.
- 2. The intoxication of these cells by bacterial or other poisons leading them to change their original form and proliferate.
- 3. The alteration of the food supply to the cells in question. We see a good example of this in skin grafts. Epithelial cells cut off from their nerve and food supply are excited to proliferate by the stimulation of heat and moisture and by being bathed in the wound secretions. In this case the granulation tissue in excess prevents this growth going on to malignancy.

We have besides these theories the theory of the parasitic and bacterial cause of cancer. The former has many adherents though the parasite has never been isolated and the latter also has its adherents, though it would seem to me that cancer would be far more prevalent in the profession if it were caused by a bacillus.

We do know that cancer is most prevalent in parous women, that it occurs most frequently about the menopause, that it is more common in the Caucasian race than in any other, that in about 20 per cent of our cancer cases there is a family history of cancer, and that in uterine cancers 90 per cent of them have their origin in the cervix.

It is probable that lacerations and chronic inflammatory diseases are a factor in the

production of cancer and the most widely accepted theory is the Conheim rest cell hypothesis.

We are prone to consider cancer as incurable by medical means but Packard reports:

A sarcoma of the thyroid—microscopical diagnosis—pronounced inoperable which recovered in two years without treatment.

A recurrent carcinoma of the breast cured by Faradic current. Two so-called inoperable carcinomata of the cervix—microscopical diagnosis, one cured in six months by D. & C. and ichthyol tampon and the other disappearing in two years without treatment.

Five carcinomata of the breast, all diagnosed by microscopical section, cured without surgical intervention, or any other treatment.

All his cases are beyond the five-year period, which would seem to prove, admitting that the diagnoses were correct, that at times the patient develops an antibody which successfully combats the disease.

The Symptoms of Cancer. Cancer is an insidious disease in that at its onset there are few if any symptoms. The first symptom is a leucorrhœal discharge or an increase in the leucorrhœal discharge which the patient already has. This more often than not is considered insignificant by the patient and she does not consult her physician. If she does consult her physician she is liable to go to one who will prescribe without examination. Last summer it was my misfortune to see a patient who had gone beyond all aid because her physician had never examined her. Again she may go to a physician who examines her and does not recognize the condition in its early stages. I have had two patients who were receiving daily treatments for leucorrhœa from their family physician and both had well developed foci of carcinoma of the cervix.

The second symptom is bleeding which is a late symptom in carcinoma of the body and an early one in carcinoma of the cervix. This danger signal often is ignored for the reason that the disease is most frequently coincident with the menopause and "common talk" has led women to expect any and all kinds of symptoms at this time as natural and inevitable. How often we hear the expression "She died with change of life."

The sooner the laity and the profession learn that any discharge from the vagina other than the regular menstruation is pathological the better it will be for all of us. A profuse putrid discharge is the next symptom and a very annoying one. This brings the patient to your office and it is often too late.

The last local symptom is pain. When we have pain as a symptom it means infiltration of the broad ligaments, vagina and bladder and usually it is too late for anything but morphia. Cachexia, loss of weight, anemia, and the "cancer look" are variable symptoms and usually are late. Many men report operative difficulties on account of the obesity of the patient. The symptoms to bear in mind are leucorrhæa, menorrhagia and metrorrhagia.

Diagnosis. The diagnosis of cancer is comparatively an easy task because in any suspicious case it is a very easy matter to excise a small piece of the growth and subject it to a pathological examination. The age of our patient is our first consideration. In cancer of the body we have a large, boggy, bleeding uterus with a foul discharge.

The previous history is one of leucorrhoa and irregular or excessive menstruation. If the symptoms do not point definitely enough to the diagnosis an exploratory curettage on a pathological examination are indicated in any suspicious case. Cancer of the cervix is usually either in the form of an ulcer or a cauliflower-like excrescence, usually the latter. When touched it bleeds very easily and this point is one of the diagnostic features. It breaks down very easily and is constantly bathed in a purulent discharge.

Virulent organisms find a ready culture media in the breaking down tissue and we frequently find cancer patients running a temperature from an infection superimposed upon the growth.

In speaking of the early symptoms of cancer the Abderhalden sero-diagnosis deserves serious consideration.

Let me leave with you the thought in speaking of diagnosis that we should always be suspicious of irregular bleeding and leucorrhœas at about the time of the menopause and should carefully examine all patients complaining of these symptoms. Let us also remember that pain, cachexia, and putrid discharge are late symptoms.

Treatment. Provided one sees the case early enough there is but one treatment for cancer of the uterus and that is the extended abdominal operation with the removal of the parametrium. All surgeons are now in accord respecting the advisability of some one of the several radical operative procedures now in vogue, but the combined experience of the surgical world has not yet determined a line of demarcation between operable and inoperable cases, and until such is determined each surgeon has only his individual experience to guide him.

The decision as to the operability or nonoperability of any specific case calls for a careful examination per vagina and per rectum to judge as to the fixation of the uterus, the infiltration of the parametrium. and the amount of involvement of the vagina and bladder. Extensive involvement of the two latter organs is a decided contraindication. In my judgment when malignancy has practically destroyed the cervix, and has involved the vaginal mucosa or adjacent tissues, metastases, with few exceptions, have already begun to develop, and the disease is beyond the reach of the knife. Deaver, in a recent article on cancer of the breast, makes a significant remark. which in my opinion is equally applicable to cancer of the cervix uteri, namely that "when a positive diagnosis of mammary cancer can be made the hope of operative cure is often vain, for the classical signs are usually unmistakable evidence of extensive metastases." The laws governing the invasion of the pelvis differ little if any from those governing the invasion of the mammary region, so that when a growth of the uterus has developed to the extent of being, not a suspicious growth, but an unmistakable cancer with all the classic symptoms, the justifiableness of submitting such a patient to the knife is to my mind questionable. When these seemingly hopeless cases present themselves, cases where the destruction of the cervix is complete, and where the growth has invaded the vagina and parametritic tissues, the cautery alone or combined with zinc chloride should be the method of choice.

Even after careful examinations a large proportion of our operations for carcinoma uteri must be considered exploratory laparotomies. Wertheim finds 61.9 per cent of all the cancer cases he sees operable. In this country the percentage is not so high. Even when we find cases operable, as far as local conditions go, we still have to consider the general condition of the patient. Cachexia, severe anemia, or excessive obesity are contraindications for a long operation with loss of blood.

The operation calls for careful asepsis, the rapid completion of the operation, minimum loss of blood, careful handling of the organs to be liberated, and the consideration of the heart in reference to narcosis. The consideration of these things is of great moment in an individual already reduced in strength by the disease. In carcinomatous foci dangerous germs in large numbers are invariably present and we too often see patients dying of peritonitis after a successful removal of the growth due to the operator's carelessness or faulty technique in handling the organs removed.

The dangers of the operation are: Death from primary shock, death from infection, injury to the bladder, injury to the ureters which are nearly always involved, and injuries to the iliac vessels.

The results one may expect may be judged from Wertheim's statistics, although we do not get as good results in this country because we do not see the cases so early.

In 250 cases he had 78 recurrences in five years; 41, or more than half in the first year; 24, or one-third in the second year; 6, 4 and 3 in the third, fourth and fifth years respectively. In short, he has 172 cases of undisputed carcinoma of the cervix who have lived for five years or more since the operation without recurrence.

He says, as we all admit, that 70 per cent of all cancer recurrences are local from incomplete operations.

Cancer surgery is in disrepute with some men but as Mayo says: "If cancer surgery is in disrepute, it is because too large a proportion of patients is accepted for operation without explanation at a stage when there is no possibility of cure and when the patients or their families should have been informed of the hopeless condition. If left without operation they would have been a living example of ill-advised delay instead of the unsuccessful results of ill-advised surgery."

A word as to the methods of treatment other than surgical. There are other methods of treatment and they have their place as truly as most of the many operations for retrodisplacement have their place in selected cases. It is also true that they are as much abused as operations for retroversion in that the operators admit that they are for selected cases, but they make the mistake of selecting all the cases.

Fulguration was much in vogue when I was an interne in the Women's Hospital. It is a delusion and a snare. By it the cancer is destroyed by the use of a projected electric spark. To sufficiently destroy the

growth the spark must be at least two inches long and I never saw one longer than an inch. It destroys by the force of its blow.

Actual cautery gives us suprising results in many cases. Werder reports 39 cases so treated. He uses the igni-extirpation method in which he cones out the growth with a platinum knife attached to an electric cautery. Of these 39 cases 17 are living after five years or more without recurrence.

Actual cautery is the method to be employed in cases that are apparently inoperable or in cases that refuse operation, while some men use it as the method of choice.

Radium apparently has some value. Just at present it is of more value as an advertising medium than as a cancer cure if one is to judge from the daily papers.

The X-ray, destructive pastes, and many other methods have some cures to their credit but to my mind are methods of last resort.

Cancer serum is of very questionable value. I had considerable experience with Berkley's serum. Its disadvantages are that it must be autogenous, or preferably should be, which means that its injection follows operation. We had considerable anaphylaxis from it, one case resulting fatally at the third injection. All but one case that I saw it used on died and that case was a breast case and the early operation may have been the whole cause of the cure.

Summary.

We all recognize that our cancer operations are too late, too limited, and often on too local a diagnosis, hence the laity has a well-founded idea that our cancer operations in general are unsatisfactory and do not cure.

Early diagnosis is important.

Early extirpation is at present the only reliable method of treatment.

Energetic cautery and radiotherapy have their distinct fields. To get results it is necessary to educate the laity to seek examination and the physician to be painstaking in his examination and diagnosis of all cases of pathological discharge from the vagina.

PROPAGANDA FOR REFORM.

BURNHAM'S SOLUBLE IODINE. — The Council on Pharmacy and Chemistry reports that Burnham's Soluble Iodine is a semi-secret preparation exploited by extravagant and dangerous therapeutic claims and therefore ineligible for New and Nonofficial Remedies. The A. M. A. Chemical Laboratory has shown that the official tincture of iodine, diluted one-half, would be essentially equivalent to the Burnham preparation. While the promoters claim that the administration of free iodine is therapeutically superior to the administration of iodines, this is a fallacy. The small dose of Burnham's Soluble Iodine recommended by the manufacturer accounts for the claimed freedom from symptoms of iodism. The Council considers as particularly reprehensible the recommendation to inject the preparation intravenously and the proposed indiscriminate use in tuberculosis. (Jour. A. M. A., May 15, 1915, p.

Secretogen.—To call attention to the unfounded and extravagant claims made for internal secretion products, the Council on Pharmacy and Chemistry reports on Secretogen Elixir and Secretogen Tablets, sold by the G. W. Carnrick Co. The report discusses the insufficiency of the evidence for the administration of secretin-claimed to be present in these preparations. The Council holds that a rational basis for the therapeutic value of Secretogen is lacking because there is no evidence that the absence of secretin is a cause of gastrointestinal diseases, and because there is no evidence that secretin in any form is physiologically active when administered by the mouth. (Jour. A. M. A., May 1, 1915, p. 1518.)

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THE CANCER CAMPAIGN.

In military parlance, organized medicine is mobilizing her forces to protect innocent America against cancer, that stealthy and deadly disease submarine which in its wiley cunning destroys over 75,000 adult Americans every year without fear of combat.

This month there will go forth from the medical press of this country, 75 journals devoting their entire issues to a consideration of the cancer problem in its various phases. We are glad to count THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION among the number. This is part of a broad educational propaganda behind which stands the American Society for the Control of Cancer, and it should at once arrest and compel the attention, the serious consideration and the active support of every conscientious physician in America. Although we do not know the active activating cause of cancer and have no specific for its cure, still there is a vast amount of accumulated knowledge of the precursors of the disease, its beginning and its clinical course based on accurate clinical and pathological observations. This knowledge has acted as a basis for certain definite conclusions.

First: That cancer is a curable disease

Second: That it begins as a local disease. Third: That in the majority of instances there exists some definite recognizable precursory lesion, before the actual beginning

Fourth: That cancer can be prevented by the removal of its precursors.

of cancer.

Fifth: That cancer can be cured by its radical removal when it is still a local disease.

These facts seem now to be firmly established. It remains to give them to the world in the best possible way. There are two definite lines of attack which we must pursue. One directed to ourselves, the other to our clientele. The responsibility, however, for both is on our shoulders, as our clientele will learn to recognize the early

signs of cancer and the impending danger behind them in direct proportion to our knowledge and our efforts and ability to impart that knowledge to them. We need a constant reminder of our responsibility to our cancerous and pre-cancerous patients, and we will not merit the trust which they impose in us unless we are constantly on the alert, ready and anxious to support any movement which promises to bring about a This issue of The Journal of the Florida Medical Association marks the celebration of its first birthday and it could not utilize its anniversary number in a better cause than that of helping to carry a ray of clarifying light into the darkness of the cancer situation.

THE JOURNAL will, beginning with this issue dedicate one page of each future issue to the American Society for the Control of



diminution in the present mortality from this disease.

The first requisite for us as physicians is to have a real, true, earnest, constant desire to give our cancer patients the best possible hope of cure. If that desire is constantly present, we will as a natural sequence of its presence, always make a careful and complete examination; always give the best advice; always err on the safe side in doubtful lesions; never pursue the plan of watchless waiting; and always have uppermost in our minds the *prevention* of cancer by the removal of pre-cancerous lesions.

Cancer, to be used for the promotion of the cause it fosters. This page will be used for printing press bulletins, statistics, cartoons and, lest we forget, occasional editorial spurs for our own phlegmatic flanks.

WORTHY OF PERUSAL.

The following letter has recently been addressed to the Secretary of each County Medical Society, component units of the Florida Medical Association, by Dr. J. Knox Simpson, Chairman, Florida Committee of the American Society for the

Control of Cancer. We commend the letter to our readers:

"Dear Doctor: You are doubtless familiar with The American Society for the Control of Cancer, its purposes, and the means by which these purposes might be accomplished. A disease which counts as its victims 75,000 adult American citizens every year; one woman out of every eight and one man out of fourteen, in the cancerbearing age, is most certainly worthy of our profoundest consternation, and our most sincere co-operation in any movement for its ultimate eradication.

"As local representatives in Florida of The American Society for the Control of Cancer, we ask the co-operation of your society in the furtherance of our plans.

"We all realize that an educational campaign for the eradication of this disease by means of early recognition and early removal, must include ourselves as well as the laity. Any means which acts as a frequently applied reminder of our duty to our cancerous and pre-cancerous patients, carries with it possibilities of a great amount of good, and is deserving of our adoption.

"It is the hope of this Committee to see established in every County Medical Society in the state the custom of devoting at least one meeting a year to the discussion of cancer in its various phases. It has seemed wise to us to select November as the "Cancer Month," and to ask each County Society to establish the custom of devoting each November meeting to a cancer symposium. Will you kindly take this matter up with your society at their next meeting, and write us what you think of the move?

"Enclosed you will find a pamphlet dealing with the scope of the American Society. Hoping to hear soon of your favorable action upon this matter, I beg to remain,

"Yours sincerely,

"J. KNOX SIMPSON,

"Chairman Florida Committee A. S. C. C."

Reviews from Current Literature

ROENTGEN THERAPY OF MALIGNANT DISEASE.

Pfahler, G. E.: Roentgen Therapy in the Treatment of Deep Seated Malignant Disease. J. A. M. A., 1915, Vol. LXIV, p. 1477.

The writer states that with improvements in equipment and technic, and with increased knowledge of the action of X-rays, "results are being obtained today that were not even dreamed of a few years ago."

It has been shown that the nearer a cell approaches the embryonal type the more sensitive it is to the rays, and that the rays are peculiarly destructive to unhealthy or abnormal cells, and that it is sometimes possible to cause a complete degeneration of such cells without affecting the normal surrounding tissue.

Roentgen therapy is now a highly specialized work, and requires, to obtain good results, an advanced knowledge, and a complete armamentarium. In untrained hands

it is likely that more harm than good will ensue from attempted treatments.

"The influence of the Roentgen rays on living tissue (according to Wickham) depends, first, on the sensibility of the individual cells; second, the quantity of the rays and the duration of their absorption; third, the special effect of the particular degree of hardness of the rays; fourth, the filtration of the rays through the tissues themselves.

Pfahler reports excellent results in carcinoma of the breast, thyroid, stomach, and larynx, in carcinoma within the abdomen and pelvis, and in deep seated sarcoma.

He concludes that malignant disease that can be completely removed should be dealt with surgically, and that every operation should be followed by competent X-ray treatment; that where delay in operation is unavoidable, preliminary X-ray treat-

ment should be given; that inoperable cases should always be given the benefit of the treatment since often they may be benefited, at least enough to give from one to eight years of comparatively comfortable life.

R. C. T.

ETIOLOGY OF CANCER.

Gaylord, Harvey R.: Etiology of Cancer in the Light of Recent Cancer Research. J. A. M. A., 1915, Vol. LXIV, p. 968.

Gaylord summarizes recent developments in the study of cancer. He states that the views of investigators are gradually coinciding; that the past intense controversy over the parasitic theory is practically at an end, since the positive discoveries of filterable viruses causing different types of chicken sarcoma have justified the parasitic hypothesis, and that at present it is only a question as to whether all or merely a few of the malignant neoplasms are caused by living organisms.

Practically all investigators agree that some extra cellular agent endows normal cells with malignant characteristics, and that the important thing is not whether this agent possesses life in an unorganized form, or whether it is so nearly a ferment that it fulfils the requirements of a filterable virus; the essential fact is that the agent does belong to the group of filterable viruses.

It is generally agreed and recognized that there is always a precancerous condition of tissue, determinable in practically all cases of skin cancer, and that this condition may be summed up as "chronic irritation." It is probable that cancer is never an absolutely primary disease, there is always the predisposing element, either growth, or ulcer, irritation, or trauma. It is also interesting to note that experiments with carcinoma in mice have apparently proven that there is at least a transmissible predisposition to cancer, which may diminish the resistance of the individual to the disease.

It seems likely that the active causative agents of cancer are varied, one or several for each type of cancer, all, however, working on their previously prepared fields of benign pathology.

Some progress is being made toward the goal of immunization against cancer, and in the treatment of cancer by inoculation—while the results thus far are not definite enough to establish these procedures on an authoritative working basis, yet they hold much hope for the future.

Cancer has been experimentally expedited by prolonged anæsthesia with chloroform and ether, and this may in some measure account for the many cancers which promptly spread after surgical interference.

It has also been definitely determined that "there is a degree of radiation which greatly stimulates the growth of tumors," and that X-rays, radium, and mesothorium may, by improper use, not only actually stimulate the disease to greater activity by direct action, but indirectly as well, through their well established faculty for the injury and destruction of lymphatics and lymphatic tissue.

R. C. T.

STOMACH CARCINOMA.

Bloodgood, Joseph Colt: Stomach Carcinoma. Its Medical Aspects. J. A. M. A., 1915, Vol. LXIV, p. 2031.

Bloodgood's observations are based on 184 cases of carcinoma of the stomach which have been observed in the surgical pathological laboratory of the Johns Hopkins Hospital during a period of almost twenty-five years.

From reading of the literature, the author has gathered that those surgical clinics, in which the total number of cancers of the stomach was larger than the total number of ulcers of the stomach, observed a larger percentage of inoperable cancer and a smaller percentage of cures among the cases in which resection of the stomach was possible than those clinics in which the number of ulcers of the stomach exceeded that of cancer.

In Bloodgood's analysis, 26 per cent of the cases have been operable, and 74 per cent inoperable. In the last five years a distinct change has taken place. So far 39 per cent have been operable. These figures surely demonstrate that patients with cancer of the stomach are being recognized earlier and referred to surgical treatment at a more favorable time.

Regarding the relation of the duration of the disease to the operability of the cancer, Bloodgood says, we have positive evidence that cancer in some individuals grows more rapidly during the same period of time than in other individuals, so that these patients, who have what may be called acute carcinoma, are forced to seek surgical aid early after the beginning of the symptoms because of the rapid growth of the neoplasm. These cases, appearing in columns of earlier interventions, always increase the percentage of inoperable cases, and decrease the proportion of permanent cures. In cancers of the stomach developing in a pre-existing lesion not cancer, it is quite possible that we may find operable and curable cases, even when the symptoms are of relatively long duration.

It seems impossible with lesions of the stomach to differentiate, especially in the early months, cancer from ulcer of the stomach, and even lesions of the stomach from abdominal lesions outside of the stomach, for example, cholecystitis and gall-stones, and pancreatitis. The key to the situation, it seems to the author, is this: Our adult population must be informed, with the highest authority behind it, that epigastric discomfort aggravated by eating solid food is a sufficient warning. They must be told that such symptoms by no means mean cancer, or disease that may ultimately end in cancer, but that with these warnings they should seek not treatment, but a thorough examination by a competent physician trained in the investigation of gastric diseases. They must be informed that restricted diet and some medicine will often give them relief; but if the disease is cancer, or something that may ultimately be cancer, such relieving treatment will only increase the danger. A thorough examination is the essential thing, and they must know that a thorough examination consists of repeated gastric analyses and the investigation with the fluoroscope or roentgenograms. No other examination will be sufficient.

If patient, physician and surgeon make no blunders, cancer of the stomach will lose its now appalling aspects.

T. T.

CANCER CAMPAIGN.

Novek, Emil: The Cancer Campaign. Bulletin Med. and Chir. Faculty of Md., 1915, Vol. VII, pp. 135-140.

The campaign against cancer is a movement to impress upon the laity the vital importance of early treatment of the disease once it has developed, and as a corollary the absolute need on their part of a familiarity with the earliest danger signals.

The life history of cancer from the time of its very inception to the time at which, for example, it is removed by the surgeon, may be divided into a number of stages, as follows:

- 1. The period which elapses from the earliest beginning of the cancer to the time at which it is noticed by the patient. There is only one way of shortening this period, and that is by educating the patient as to the importance of keeping a sharp lookout for danger signs, of sharpening his powers of perception from a cancer standpoint.
- 2. The period from the time at which the patient recognizes there is something wrong to the time at which it is brought to the attention of the physician. This is the period in which the fatal delay usually takes place, and this is the period which we should especially try to shorten by hammering away at the public until every man and woman knows the hopefulness of early treatment and the hopelessness of treatment when long deferred.
- 3. The period from the time at which the patient seeks the advice of his physician to the time at which the latter calls in the sur-

geon. This period may be short or it may be long-short if the physician is conscientious and well informed, long if he is careless, indifferent or ignorant. It is this period especially in which medical men should feel their greatest responsibility, and which they should endeavor to shorten as much as possible. The cases of cancer which offer the greatest hope of permanent cure are those in which the lesion is of the borderline type, so that the practitioner is in much doubt as to whether or not cancer really exists. The responsibility of such decision is too great for him to take alone, and it is here that so much may be gained by co-operation between the physician and surgeon. The medical man must discard much that he has perhaps learned in his school days as to the symptomatology. It would be well for every man among us to remember the dicta laid down by a wellknown surgeon that "The easier the diagnosis the worse the prognosis."

4. The fourth period embodies the time from the surgeon's first acquaintance with the case until the cancer has been removed. The length of this period is distinctly under the control of the surgeon, assuming that the patient is willing to follow his advice. It may fairly be said that there is less reason for criticism as to the length of this stage than that of any of the others.

The Present Status of the Cancer Campaign.

The dawn of the modern movement against cancer dates from 1900. In England the cancer ward at the Middlesex Hospital had by that time developed into a cancer wing, and in 1900 special laboratories were added to it for investigation of cancer, under the direction of Dr. W. S. Lazarus Barlow. In the same year the Deutsche Comité für Krebsforschung was organized in Berlin, receiving an annual subsidy of 5,000 marks from the imperial exchequer. In 1901 the Imperial Cancer Research Fund was founded in England.

In the United States it is only within recent years that there has been any organized effort to combat the cancer scourge. At a meeting of the Clinical Congress of Surgeons of North America in New York in 1913, its now well-known cancer committee was appointed. This committee was instructed to write or to have written articles on the subject of cancer and to disseminate knowledge concerning this disease in any way it might consider expedientthrough the daily press, weekly or monthly magazines, etc. The committee has performed a most meritorious work, with the co-operation of certain important periodicals. Mr. Samuel Hopkins Adams published excellent articles in The Ladies' Home Journal, Collier's Weekly, and McClure's Magazine. These articles were copied by newspapers throughout the country. addition to such work as the above, lectures on cancer have been given under the auspices of the cancer committee in various parts of the country.

In the early part of 1913 there was founded in New York the American Society for the Control of Cancer. Its organizers were in part laymen and in part surgeons. This society has been doing an active and admirable work, and is fast gaining in membership throughout the country.

In 1914 the Council on Health and Public Instruction of the American Medical Association appointed a committee on cancer. In addition to these various organizations, mention may be made of the various excellent cancer laboratories connected with a number of our large universities, notably Harvard and Cornell, and also of the laboratory established in Buffalo in 1899 under Dr. Roswell Park, and formally placed under the control of New York state in 1901.

All the agencies above mentioned have been carrying on their work in a spirit of hearty co-operation. The splendid enthusiasm already manifested in this great work is sure to light up the active interest of both the profession and the laity throughout the entire country.

G. R. H.

NON-PIGMENTED SARCOMA OF THE SKIN.

Schalek, Alfred; Schultz, Oscar T.: An Unusual Case of Generalized Non-Pigmented Sarcoma of the Skin. Journal of the American Medical Association, 1915, Vol. LXIV, p. 1901.

Schalek and Schultz report a very interesting case of multiple non-pigmented sarcoma of the skin, which terminated fatally on the sixteenth day after being seen by the writers, the case is reported both from the dermatological and pathological aspect; it was found that a number of sarcomatous nodules were disseminated throughout the abdomen and thorax. The article includes a short review of the clinical history of sarcomatous lesions of the skin. and three photographs, one of the patient and the other two of sections from the lesions and the following summary appended.

Sarcomatosis cutis included several conditions, the inclusion of some of which among the true blastomas does not appear entirely justifiable. This is true of the idopathic multiple pigment sarcoma of Kaposi, the presence of true pigment-forming cells in this condition also being not established with absolute certainty. The diffuse sarcomatosis of Kaposi is apparently the same as mycosis fungoides, which, in its earlier stages at least, has the histological characters of an inflammatory granuloma rather than that of a true tumor. Multiple true sarcomas of the skin may arise from a primary skin tumor or they may be metastases from tumors of the internal organs; structurally they may be round or spindle cell, or they may be composed of pigment cells.

In the case reported, the sarcoma type, if one chooses to classify the tumor among the sarcomas, is the lymphendothelioma.

Over five hundred visible skin nodules were counted. There were in addition very many palpable but invisible tumors.

Innumerable nodules were present in the mediastinal, omental, mesenteric and retroperitoneal tissues. The parenchyma of the internal organs and the lymph nodes remained practically free of tumors.

The primary tumor developed from a papillomatous lesion near the elbow. Histologically this lesion was a lymphangioma hypertrophicum.

The case was characterized by the very rapid development of the secondary tumors. The first change in the previously benign primary lesion was noticed three weeks before admission to the hospital; death occurred on the sixteenth day after admission.

J. L. K.-S.

CANCER OF THE STOMACH.

MacCarty, W. C.: The Histogenesis of Cancer of the Stomach. American Journal Medical Sciences, Vol. CXLIX, 1915, p. 469.

The general belief is, in agreement with Conheim's theory, that tumors have their inception in prenatal cells, rests or inclusions. While there is much in favor of this theory in so far as benign tumors are concerned, even the warmest sponsors of the theory do not urge it as fully explaining the origin of malignant neoplasms.

MacCarty states that he has never been able to assert that an embryonic rest in sections of a simple ulcer of the stomach was prenatal and that the postnatal rests were either atrephic epithelium or real carcinoma.

The normal gland of the gastric mucosa is lined with a simple layer of columnar or cuboidal cells. The cells are of uniform size with the nucleus located near the base of the cell. For this reason the demonstration of a germinative layer or germinative focus in the gastric mucosa has never been demonstrated.

MacCarty shows microphotographs of simple chronic gastric ulcers in which the only changes from the normal are the presence of a few differentiated fibroblasts and some lymphocytes. Other pictures show gastric glands lined with round or

oval cells, with prominent nucleoli and a well-defined intra-glandular cytoplasia. The cells within the lumen of the gland are morphologically indistinguishable from the cells of the frank carcinoma. The microphotographs in the article seem to show that an analogy in the origin of gastric cancer to cancer of the prostate, breast and skin exists. The writer concludes that whatever the exciting cause, gastric cancer arises from the intraglandular hyperplastic cells of the mucosa and represents the endstage of a process of hyperplasia of normal cells. In other words, the histogenesis of cancer lies in the gastric glands and not in embryonal rests. н. н.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

PAPAVERINE.—An alkaloid obtained from opium, but not chemically related to morphine. Its use has been proposed in various atonic conditions of the smooth muscles, particularly in gastric and intestinal spasms, for the diagnosis of pyloric spasm, biliary colic and in bronchial spasm. It is a feeble analgesic and local anesthetic. Neither tolerance nor habituation from its use has been reported. It is used in the form of its salts (see below).

Papaverine Hydrochloride.—This contains not less than 88 per cent of papaverine. Papaverine hydrochloride is odorless, bitter and permanent in the air. It is sparingly soluble in water; soluble in alcohol; very soluble in chloroform; insoluble in ether. It is marketed as:

Papaverine Sulphate.—This contains not less than 85 per cent of papaverine. Papaverine sulphate is odorless, bitter and slightly hygroscopic. It is soluble in water

and in alcohol; very soluble in chloroform; insoluble in ether. It is marketed as:

PAPAVERINE HYDROCHLORIDE, MERCK.—Merck and Co., New York.

PAPAVERINE HYDROCHLORIDE, ROCHE.— Hoffman-LaRoche Chemical Works, New York.

PAPAVERINE HYDROCHLORIDE, ROCHE, TABLETS.—Each tablet contains papaverine hydrochloride 0.04 gm. Hoffmann-La-Roche Chemical Works, New York. (*Jour. A. M. A.*, May 29, 1915, p. 1849.)

Papaverine Sulphate, Roche, Ampules.—Each ampule contains 0.04 gm. papaverine sulphate. Hoffmann-LaRoche Chemical Works, New York. (*Jour. A. M. A.*, May 29, 1915, p. 1849.)

Hoffmann-LaRoche Chemical Works:

Papaverine Hydrochloride, Roche.

Papaverine Hydrochloride, Roche, Tablets.

Papaverine Sulphate, Roche, Ampules. Hynson, Westcott and Co.:

Ouabain Ampules, H. W. and Co. Merck and Co.:

Papaverine Hydrochloride, Merck.

STANDARD RADIUM SOLUTION FOR BATH-ING.—A 5.2 per cent barium chloride solution containing radium chloride equivalent to 4.2 micrograms of radium per bottle. For "Actions and Uses" see the article on radium in New and Nonofficial Remedies. The barium in the solution is said to have no effect. The contents of a bottle, containing 4.2 microcuries or 10,000 Mache units are used for a bath. The Radium Chemical Co., Pittsburg, Pa. (Jour. A. M. A., April 17, 1915, p. 1325.)

STANDARD RADIUM SOLUTION FOR DRINKING.—A solution of 2 micrograms of radium and 1.3 mg. barium chloride per bottle of 60 c.c. For "Actions and Uses" see the article on radium in New and Nonofficial Remedies. In view of the small barium content, it is claimed that the physiologic action of barium may be ignored. The Radium Chemical Co., Pittsburg, Pa. (Jour. A. M. A., April 17, 1915, p. 1325.)

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ORIGINAL ARTICLES

LOCAL ANESTHESIA IN THE IN-FANT AND AGED.*

> HERBERT P. COLE, M. D., Mobile, Alabama.

Mortality statistics indicate a definitely increased anesthesia death rate in infants and in patients over fifty years of age. This is readily attributable to the susceptibility of the infant's delicate organism to shock, pneumonia and renal complications following the administration of general anesthesia. A fine point of surgical judgment is frequently involved in the selection of the proper anesthetic in aged cases prone to be complicated by general debility, cardiorenovascular and pulmonary lesions.

Investigations with novocaine and adrenalin have given the surgeon a definite factor for the reduction of mortality in major surgery of the extremes of life. Experience in the special technic of local anesthesia administration discloses the frequent necessity of the administration of a preliminary narcotic, such as scopolamin, or morphine, or similar dropout is in combination. A study of the mental peculiarities of the individual patient will usually indicate the method necessary for their mental control.

The success of local anesthesia frequently depends on drilling the surgical staff to obviate untoward incidents disturbing the mental equilibrium of the patient to be operated on in the conscious state. An unsuccessful administration can usually be traced to a series of untoward incidents such as tactless conversation, unnecessary jang-

ling of instruments, and other preventable breaches of operating room morale tending to produce a psychic condition which eventually calls for the administration of a general anesthetic for the completion of an operation.

Gentleness in the exposure and handling of tissues, especially the abdominal viscera, is an absolute essential in successful surgery on the conscious patient. The use of the gloved hand, or carefully placed spatulæ, will give excellent exposure in most cases. Traction upon mesenteries must be avoided in so far as is possible; sensitive areas, such as that of the upper right quadrant, must be treated with great consideration. Large abdominal incisions are preferable in permitting free exposure with little traction. Acute inflammatory cases or those in the upper right quadrant may be carried through a painful period by the temporary administration of nitrous oxide.

The infant presents the more difficult subject for the administration of local anesthesia through our inability to obtain mental control. The administration of a preliminary narcotic, however, will frequently eliminate a child's conscious perception. Starvation of the suckling child for several hours before the operation, followed by the administration of the nursing bottle during the operation, is a potent factor in successful anesthesia. In this manner, we have successfully performed double herniotomy for incarceration in an infant three weeks of age; reduction of a meningocele in an infant of six weeks and have established artificial anus in the third day of life on an infant with ano-rectal imperforation.

We have repeatedly observed that patients

^{*}Read by invitation before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

over fifty years of age are more favorable subjects for local anesthesia operations than patients in the other decades of life. Whether age predisposes to greater mental control or to greater susceptibility to the preliminary narcotic, we are unable to say. Within the past two years we have repeatedly and successfully performed major operations under local anesthesia in patients suffering grave contra-indications to a general anesthetic. The following is a partial list of operations successfully performed in this manner on patients over fifty years of age:

- 1. Nephrectomy, adenoma of the kidney, patient age 53.
- 2. Gastro-enterostomy, carcinoma of the pylorus, patient age 71. Extreme debility and interstitial nephritis.
- 3. Radical amputation of the breast, patient age 63. Interstitial nephritis.
- 4. Reduction of ileus, patient age 79. Emaciation, shock and nephritis.
- 5. Transplantation of the rectus muscle, radical cure of incarcerated hernia, patient age 79. Emaciation, nephritis.
- 6. Excentration of the orbit, sarcoma of the conjunctiva, patient 81 years of age. Senility, nephritis.
- 7. Extensive operation for carcinoma of the sternum, patient 87 years of age. Interstitial nephritis, blood pressure 210.
- 8. Cholecystotomy and removal of gall stones, patient age 63. Mitral insufficiency.
- 9. Appendectomy, patient 60 years of age. Gangrenous appendix, pulmonary tuberculosis.
- 10. Appendectomy, patient 57 years of age. Gangrenous appendix, nephritis.
- 11. Appendectomy, cholecystotomy, patient 57 years of age. Rupture of gall bladder, interstitial nephritis, blood pressure 220, myocarditis.
- 12. Gastro-enterostomy, cholecystotomy, appendectomy. All operations through the same incision for gastric ulcer, cholecystitis and cystic dilatation of the appendix, patient

age 57. Complicated by hyperthyroidism.

The above list of major operations in the aged in presence of surgical complications has been supplemented by an interesting experience of the application of local anesthesia methods in the youth and adult. We have performed about thirty per cent of our major operations in the past two years by infiltration, nerve blocking, and plexus anesthesia, or by combinations of these methods. It is now our routine procedure to perform practically all our operations on the face, neck and extremities under local anesthesia.

Most pus cavities in the peritoneum are drained under local anesthesia, to be supplemented by a second-stage general anesthesia operation later if necessary. Fulminating appendix, gall bladder and pelvic cases are certainly robbed of many of their terrors by a preliminary draining under local anesthesia.

Among the chronic conditions, the twostage pylorectomy is a natural evolution of local anesthesia methods; local anesthesia gastro-enterostomy in the emaciated patient, followed by a few weeks later by resection under better physical conditions brought about by the gastro-enterostomy. Appendectomy in the chronic and interval cases may be routinely performed under local anesthesia in uncomplicated cases. In pregnancy we have operated on thirty-one cases in the past three years for abdominal conditions, carcinoma of the breast and hyperthyroidism. A number of these cases have been done entirely or largely under local anesthesia. There have been no maternal deaths and but one miscarriage in those performed under local anesthesia.

In conclusion, we append a series of illustrations demonstrating the application of local anesthesia to major surgery in the infant, the aged and the young adult. Experience in the application of local anesthesia methods will undoubtedly give the surgeon a potent aid in the reduction of mortality in complicated cases.



1. Bilateral herniotomy. Infant three weeks of age. Local anesthesia. Photograph at two years.



2. Meningocele. Patient six weeks of age. Local anesthesia.



3. Artificial anus. Child three days old. Local anesthesia. Ano-rectal imperforation.



4. Nephrectomy. Adenoma of the kidney. Patient age 53. Illustrating points of injection.



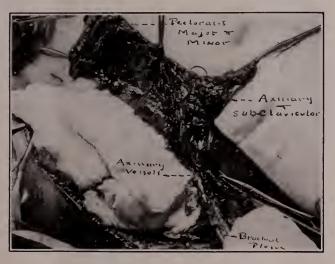
5. Nephrectomy. Adenoma of the kidney. Patient age 53.



6. Excentration of the orbit. Sarcoma of the conjunctiva. Patient age 81. Nephritis.



Radical amputation of the breast. Patient age
 Injection of brachial plexus, sternum and posterior intercostals.



8. Radical amputation of the breast. Patient age 63. Brachial plexus injection. Nephritis.



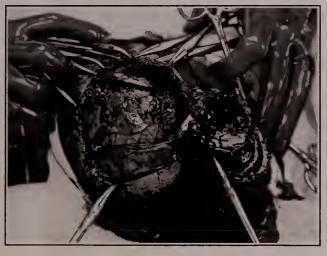
9. Bilateral, radical cure of hernia. Transplantation of the rectus muscle. Patient age 79.



 Dislocation of the atlas. Age 52. Hemiplegia. Reduced under local anesthesia after sectioning the posterior cervical muscles.



11. Carcinoma of the sternum. Radical operation. Patient age 87. Nephritis. Blood pressure 210.



12. Decompression and dural drainage. Traumatic epilepsy. Hackenbuch infiltration. Local anesthesia.

903-904-905 Van Antwerp Building.

DISCUSSION.

Dr. Raymond C. Turck, Jacksonville:

I have been very much interested in Dr. Cole's paper and I think we are all to be congratulated on hearing such a splendid exposition of this subject. The work with local anesthesia has not been developed as it should be. Dr. Cole has nicely pointed out that local anesthesia eliminates many dangers arising from general anesthesia. In general, local anesthesia has had but a limited application, and I am glad to see the wide range that Dr. Cole has covered. I have done a number of cases of hernia, bladder and appendix and other abdominal operations with local anesthesia, and also some bone work, though in the latter only minor procedures. Dr. Simpson, in Jacksonville, has been doing some work along the line of nerve block. As I said before, I am very glad to see the wide range that local anesthesia is taking because it will allow us to work in cases which heretofore have been considered hopeless and inoperable.

Dr. W. B. Spratling, Welaka:

In major operations on the brain for the relief of epilepsy for instance, either to relieve pressure or for the removal of a tumor, where would the point of injection be?

Dr. William L. Hughlett, Cocoa:

I would like to ask Dr. Cole what kind of special preparation for local anesthesia he has, if he has one.

Dr. John E. Boyd, Jacksonville:

I have no desire, gentlemen, to discuss Dr. Cole's paper in the sense that these papers are ordinarily discussed, but sometimes our misfortunes come home very truly to others as well as ourselves, and I have a desire to report a personal misfortune of mine with probably the chance of getting some assistance from Dr. Cole.

Wednesday night, about three weeks ago, a doctor's wife wanted to remove some

She had a prescription with freckles. bichlorid of mercury in it. She poured out one-half of the solution and added mercury on her own initiative and without any accurate knowledge of the amount. This was applied to the face and neck freely. Within twenty minutes after the application the pain was so intense that I was called. I gave a hypodermic of one-fourth grain of morphine and ordered applications of cow's cream. She had a fairly comfortable night but Thursday morning had some nausea and the skin on face and neck was absolutely cooked. As yet no evidence of poisoning except slight nausea. I did not go back in the afternoon but was called over the phone about seven o'clock Thursday evening and was told there had been severe pain with cramps all afternoon; bloody stools and vomiting, undoubtedly bichlorid poisoning. I sent a nurse and Thursday night she had one-fourth grain of morphine, three o'clock Friday morning one-fourth grain morphine. I saw her at eight o'clock Friday morning and she had not voided any urine since the previous night. She was catheterized and three ounces of perfectly clear urine obtained. I then put the proposition up to the people as to a cæcostomy with hydraulic irrigation of colon, saving to the people that I had had no experience as to the benefits of the treatment but felt that anything was justifiable in a case of bichlorid poisoning. They sent her to the hospital at one o'clock and she was given one-fourth grain morphine, and one-one hundred fiftieth of scopolamin at one o'clock. Fifteen minutes of two she was in the operating room and being still nervous and more or less excited. I ordered one-eighth grain morphine given hypodermically. She was operated according to Crile's shockless method and I assure you I have never seen a more beautiful demonstration at any time in my experience. I want to say, however, that my experience has not been so extensive as

Dr. Cole's, but will be more extensive in the future. It is unquestionably, in my mind, one of the greatest things of the day. The woman was perfectly conscious through the whole operation and talking with the anesthetist. When I got through she talked with me and said she would not have believed that her abdomen could have been opened without any pain.

Before going to the operating room the pulse went as high as 130. She went on the table with a pulse of 110; respiration 24. Came off with pulse 90 and respiration 20, remaining conscious. The local anesthesia used was 1-400 novocaine and 1-6 per cent urea and quinine. She talked along until about five o'clock, when she apparently went to sleep. At six o'clock the respirations were twenty-two and the pulse eighty. At six-fifteen respiration dropped to eight and the pulse to fifty-eight. I got to her at seven o'clock and then the pulse was about sixty and respiration around about fourteen. The pulse was regular and of good volume but slow; no cvanosis, color good. The mother was very much exercised and I told her that the low respiration need not worry her at all; that it was not an unusual phenomenon. stayed around on account of the mother probably twenty or thirty minutes. This pulse was the only thing that worried me. At the end of that time I again felt the pulse, which was about sixty and regular. While feeling the pulse she stopped breathing suddenly. I reached over and pulled her tongue out of her mouth, whereupon she immediately began to breathe and continued to breathe regularly for 12 or 14 respirations, when she stopped suddenly again. I pulled out tongue again, used artificial respiration, also oxygen but she never took another breath. Death was unexpected on my part and it worried me not a little, especially as I had not been using Dr. Crile's method for any great length of time, although I could not by any flight of imagination attribute her death to threeeights of a grain of morphine and 1-150 of scopolamin. The operation began at two o'clock, she came off of the table at threethirty and death occurred at seven-thirty or eight.

Not having had a great many cases of bichlorid poisoning, I was at a loss in my mind as to whether the death was due to bichlorid poisoning. Although I feel that the woman was susceptible, I do not feel that bichlorid poisoning was the cause of her death. I believe it was cebrebral embolus.

The only question remaining now is where she picked up the embolus. Did she pick it up from the burnt tissues of face and neck, or did she pick it up from the field of operation, or secondary ulceration in the big bowel from bichlorid absorption.

I wrote Dr. George W. Crile regarding this patient and he replied that while he was intensely interested in the case at that distance he felt that the individual was one of those people peculiarly susceptible to bichlorid of mercury and that there must have been some ulceration in the big bowel, following absorption, but the immediate cause of death was most probably embolism. I can not by any possible flight of imagination suppose that death was due to the use of the morphine.

The case is intensely interesting to me and I can not help but feel that although so unfortunate it should be intensely interesting to every man in the Society, especially those men who are doing and anticipating surgery under local anesthesia.

Dr. J. G. DePuis, Lemon City:

I would like to ask the essayist what kind of anesthetic he uses on little infants two weeks or two months old.

Dr. Frederick J. Waas, Jacksonville:

I have not been doing much surgery under local anesthésia, but I am so much impressed with Dr. Cole's paper that I want to do more. I have a patient sixty-nine years of age, who has to have an operation for gall-

bladder and would like to know what would be the technique for doing this unkler the local anesthetic. I am so carried away with Dr. Cole's work that I would like to know more about it.

Dr. Mary Freeman, Perrine:

I would like to ask Dr. Cole if it would be advisable to administer local anesthesia before sending patients into the hospital or where they can have proper treatment. People who have been wounded in the country are often sent to me and I send them to Miami, seventeen miles. I usually give them H. M. C. and atropine 1-150, or morphine ¼ grain and atropine 1-100 grain. One case, gunshot wound in the abdomen, had thirteen perforations of the intestine; another fifteen perforations of the intestine. The man with thirteen lived: the woman with fifteen died, though she lived five days. Would you give the local anesthesia before starting them on?

Dr. J. S. McEwan, Orlando:

I simply want to say that I enjoyed Dr. Cole's paper very much. I think that the reason surgeons do not use local anethesia more is because they do not want to take the time and it certainly takes time to do surgical work under local anesthesia. experience in the various clinics is that they do not take the time to use it and I will say also that I think in adults the use of, especially those in poor condition, local anesthesia preceded with morphine and scopolamin is ideal. If we use local anesthesia without preliminary hypodermics we are going to take lots more time and trouble and the shock causes a good many deaths. Dr. Cole did not give us information regarding the doses administered or how long he keeps children on the table when he is operating. It is the little ones that give most of us trouble. I experimented with quinine and urea hydrochloride but had too many cases necrose.

Dr. G. M. Chancey, Tampa:

I am pleased to see the ever-widening field

for local anesthesia and to note the safety and efficiency with which modern local anesthesia is now utilized in surgery. I would like further to ask if this local anesthesia supplemented with scopolamin and morphine is practical for prostatectomy. The operation requires one to two hours, which is a good while for an old man. It is the bane of the old man, he suffers much from such trouble and when he comes to the age where his suffering begins we much prefer not to use ether or a general anesthesia. I am pleased to learn that such work can be done and that it is alike indicated in the surgery of children or any other age for that matter, where a local anesthesia is preferred. It has been my pleasure to see some extensive surgical work done in a few instances with local anesthesia without pain, on or about the same line that Dr. Cole pursues. I am pleased to learn in acute bronchitis with peritonitis and appendiceal abscess complication in measles, etc., where general anesthesia is contra-indicated that local anesthesia can be instituted with safety.

Dr. Raymond C. Turck, Jacksonville:

If you will pardon me I would like to take exception to the last speaker's statement that the operation of prostatectomy takes from one to two hours. This is one operation that has been so perfected that with the two-stage procedure mortality has been cut down to less than four per cent. No prostatectomy should take over thirty minutes. Rapidity is one thing that enters largely in the advantage of the two-stage method. Shock, both general and from anesthesia, is almost entirely eliminated. First, a supra-pubic cystostomy is done entirely under local anesthesia, the bladder is drained and irrigated, then in a week or ten days, after the bladder is in good condition and renal function has been re-established. supra-pubic prostatectomy is done through the incision which has been previously made. This should be done under local anesthesia and gas. With this method the

mortality has been reduced to about three per cent in all ages, and that is one thing that the men throughout the state and country should get into their minds—that it is safer for a man to have a prostatectomy done than for him to lead a catheter life. Twenty per cent of all cases if not operated will die within three years; ninety-six per cent will live if operated, with freedom from danger and distressing urinary symptoms.

Dr. M. G. Chancey, Tampa:

I was not certain as to the choice of anesthesia even yet indicated in prostatectomy. I understand it would be different in different cases and different in the same individual at different times. I wanted to know if such an operation could be done exclusively under local anesthesia. I also desire to ask if a case of bi-lateral inguinal hernia could be operated on in an old man of seventy-two years, who has been wearing a truss twenty or thirty years and whose hernia occasionally becomes strangulated and if the operation could be done exclusively under local anesthesia, and if so, would the matter of reduction be attended with any more difficulty than under general anesthesia.

Dr. H. P. Cole (closing discussion):

In reply to Dr. Spratling's query as to methods of local anesthesia infiltration in cranial operations, state that my experience has only involved the method of Hackenbrusch, a circular or pentagonal infiltration of the operation field beyond the limits of incision. This is accomplished with about 60 to 90 c.c., of a one per cent solution of novocaine with adrenalin injected at several points and carried by the needle through the different layers to the periosteum, connecting the various points of injection. Pressure of the tourniquet is not uncomfortable as a rule.

Observations on cranial surgery under local anesthesia are limited, at the time of my decompression no similar operations had been performed in America in so far as I

am aware, in Europe about fourteen craniotomies had been reported. One is astonished at the complete absence of pain upon opening the cranium and dura, the periosteal innervation is derived from the overlying soft tissues, the innervation of the dura is nil, extensive incisions are accomplished without Local anesthesia of the scalp and periosteum undoubtedly diminishes excitability of the cortical areas to electrical stimuli, this is one and almost the only disadvantage of these operations under local anesthesia. This is offset by the advantages to be obtained in eliciting information from the conscious patient in response to experimental pressure, heat, cold and the like. I predict marked advances in our knowledge of the brain sensory areas through legitimate experimentation upon the conscious patient under local anesthesia.

Replying to Dr. Hughlet, state that the usual solutions I use are one-half of one per cent novocaine containing three minims of adrenalin to the ounce, this for infiltrations. small amounts of one per cent solution for perineural infiltration and even two per cent solution in the brachial plexus or the large nerve trunks. These solutions are made fresh for each operation and are sterilized by boiling. Many other satisfactory solutions are in vogue, one might well become accustomed to the actions of a uniform solution. As high as thirty grains of novocain have been used in the course of a two-hour operation without toxic symptoms. Where we are to use large amounts we consider morphine before and after operation a safeguard and administer large amounts of water as an eliminant. Naturally large amounts of the solution ooze out of the incision and are not a factor of absorption.

In reply to Dr. DePuis state that the half per cent solution suffices for infants, in one I used quinine and urea, this case required a few drops of chloroform inhalation. If the infant is starved for several hours before operation, it will direct its attention to the nursing bottle rather than to the surgeon throughout the operation.

In reply to Dr. Mary Freeman state that I feel it is always good surgery to give surgical cases morphine before transporting them for imperative operations. The prevention of shock is largely accomplished in this manner, where possible an injection of novocaine in the brachial plexus or sciatic should be made in cases of compound fractures of the limbs. As to gunshot wounds of the abdomen, of course only morphine avails before such transportations.

In reply to Dr. McEwan state that in most of our cases we use a preliminary dose of morphine and in many it is used in combination with scopolamin. In patients of fifty years, we usually give an eighth of morphine and one-two-hundredth of scopolamin one hour before and a sixth of morphine and a two-hundredth of scopolamin a half hour before operation. At the table a further small dose of morphine may be given. This suffices to produce complete twilight sleep in about one-third the aged cases. One should watch the respirations in these cases carefully, especially after operation. I have seen the respiration as low as four in one case, an intravenous saline corrected the condition readily. Such cases should not have the chest lowered. Scopolamin and morphine cases are certainly treacherous cases to administer ether to; should ether become essential to the completion of the operation, it should be used most cautiously.

In reply to Dr. Waas state that the local anesthesia technique of gall bladder cases is to be applied successfully only to the thin patients having stones or pus in the gall bladder, or in cases wherein a preliminary drainage of the gall bladder converts a serious risk into a reasonably safe risk for common duct surgery. Common duct work can only be done by supplementary gas or other administration.

In reply to Dr. Chancey state that Dr. Turck has largely answered his question as

to prostatic surgery under local anesthesia, This work can be done absolutely under local anesthesia, either after the method of Lower; abdominal infiltration and local filling of the bladder with alypin, or by injection of the sacral plexus after the method of Lewin permitting a ready perineal operation. I have performed several cystotomies and removal of vesicle tumor by the abdominal route under local anesthesia. The prostatectomies have been done under spinal administration of novocaine and more recently, stovaine.

In regard to Dr. Chancey's case, aged seventy-two, with bilateral inguinal hernia, state that this is the ideal case for local anesthesia, can be corrected with less shock and danger than under any other form of anesthesia. It is the typical case wherein the outcome rests on surgical judgment, that judgment usually hinges upon the choice of anesthesia.

AN UNPUBLISHED CIRCUMCISION OPERATION, WITH MANIKIN ILLUSTRATIONS.*

J. Harris Pierpont, M. D., Pensacola, Fla.

Having witnessed on several occasions, while a student at college some twenty-eight years ago, the disappointing results of the old-fashioned operation of "pulling out and cutting off" the prepuce, I devised the operation herein described, and used the subject matter for the preparation of my graduation thesis in 1888. Since that time a number of modifications of the above mentioned procedure have been made, but there are still many surgeons who practice the old method, and are often disappointed in the results attained.

It is quite easy to overlook the fact that the dorsal portion of the prepuce is four or five times the length of the frenal, and also that frequent adhesions of the mucous mem-

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

brane to the glans, and the very loose connection between the skin and mucous membrane permits an easy pulling out of the dorsal portion of the prepuce which is opposed by an almost fixed and inelastic frenal portion. These anatomical facts easily explain why, even in the hands of experienced surgeons, sometimes too much or too little prepuce is excised, and the surgeon has an imperfect operation to his credit.

When the prepuce is pulled out and excised, it almost invariably follows that perfect coaptation of the mucous membrane and skin margins cannot be effected, and there is a consequent unevenness of the suture line.

The operation here described, and shown on the manikin, removes the possibility of falling into error, even by the inexperienced surgeon.

Assuming that asepsis and anesthesiahave been produced, and the blood supply shut off, a plain thumb forceps blade ispassed up between the glans and prepuce in the median line a distance of about threefifths the distance between the meatus and corona. Taking the body of the forceps in the left hand and depressing it, the points which firmly grasp the tissues are elevated so that there is no danger of cutting in the glans when the first cut is made through the prepuce. Use a curved on the flat sharppointed scissors, serrated edges preferred, and make a transverse (semi-eliptical) cut through the prepuce, exposing the glans. A suture is then placed above in the median line, the ends of which are left long to aid in further manipulations. A second suture is placed just opposite the first in the margin of the lower segment which is also left long for holding the excised portion of the prepuce in proper position. This second suture is a necessary part of the operation, because by its use the heavy prepuce is kept in normal position and the conformation of the parts are maintained. Otherwise there would be a dragging down of the prepuce with consequent stretching and distortion.

A second snip of the scissors on either side following the line of the corona is made, and sutures taken well back of the margins. The snipping and suturing is continued alternately on either side until the line of incision is within an eighth of an inch of the median line of the frenum, leaving a quarter of an inch of prepuce.

The dependent portion of the prepuce, which has been excised, is then allowed to drop over the glans, thus exposing the inner portion of the uncut frenal portion of the prepuce. A suture is then placed just within the lowest angle of the cut, the needle passing through from within outward and reinserted at the other cut angle from without to within. The frenal artery or arteries are thus securely tied, and troublesome hemorphage avoided. A final snip or two with the scissors severs the prepuce, and a continuous small size catgut suture brings the raw edges of the cut together, completing the operation.

The manikins here presented will show in detail the successive steps of the technique above described.

Instead of using the thumb forceps and scissors in making the primary incision, in adult cases, I employ a prepuce punch which was made for me by Messrs. Knauth Brothers of New York. The blade of this instrument, however, is too much curved, the maker not having followed the description sent him. The punch has an advantage over the scissors in cutting through the prepuce while it is in normal position, for there is some stretching of the parts even when using the thumb forceps and scissors.

UTERUS DUPLEX WITH REPORT OF A CASE.*

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Embryologically, the uterus and vagina are formed by the fusion of the two Mul-

^{*}Read before the forty-second annual meeting of the Florida Medical Association, at DeLand, May 12-14, 1915.

lerian ducts, the union taking place from below upward. Lack of fusion at any point, or throughout the length of the two canals, explains almost all of the anomalies that are observed, and rudimentary development of one duct will account for the balance. All degrees of lack of fusion are to be noted, there being one case on record where two complete, but single and distinct parturient canals with two vulvæ were formed, uterus didelphys, and it is not rare to find the fundus uteri indented in the middle—the uterus arcuatus, which is just the indication of the upper end of the line of fusion of the two ducts.

In the double uterus we have a rare condition, in which the ducts (Muller's) do not unite at all, and consequently, there are two separate uterine cavities and one or often two vaginas; each body has its tube and ovary. This is a retrograde form corresponding to that of the lowest manimalia. The short, broad ligament connects diverging bodies. It is said that ovulation in these cases occurs in one ovary one month, and in the other the next. Up to 1889, 230 cases of wholly double uteri and 144 of double vagina have been cited by an observer, and in a review of the literature up to 1913 there have been 330 cases of double uterus and 230 of double vagina. These numbers, however, cannot be an accurate estimate of the cases actually occurring since this condition of reduplication is most easily overlooked.

The special dangers of the double uterus are: Multiple pregnancies, with attendant dangers and sequelæ, among the 330 cases there were twins 39 times and triplets twice, also 10 cases of rupture, for with a double uterus the danger of rupture is greatly increased, especially since one uterus is frequently undeveloped. Where the two uteri are more or less widely separated, the other becomes a source of danger when the one is impregnated.

Hematocalpos, owing to the stenosis of the cervix. Menorrhagia, unilateral atresia, dyspareunia, double vaginitis or endometritis, obstruction to labor by the retroverted non-gravid half, obstruction due to the vaginal septum and retained and undiscovered products of conception in one half in cases of double pregnancy. Both sides of the uterus may be pregnant at the same time, with the fœtus in each at the same time or a different period of development. The occurrence of a double pregnancy of different periods in a uterus septus probably explains the so-called cases of superfetation. One case is reported by Gemmell and Patterson, of a woman with a duplication of bladder, uterus, vagina, and vulva, who successively conceived and gave birth to a child from each genital canal.

Case report. Mrs. H. Age 24 years. Family and personal history, negative. Menses began at twelve years, seven-day type; no pain, irregular, lasting two to five weeks. Married at seventeen years, pregnant immediately. Had a miscarriage at five months; two months later became pregnant again. This time miscarried at eight months. Menstruated every two weeks during the next year, pregnant again at the end of the year, carried the baby eight months and miscarried again. After this had menses every two weeks for years. Was not well, and upon recommendation of a neighbor, went to a sanitarium for treatment. The doctor examined her, told her she needed an operation, curetted her, sewed up the neck of her womb, and told her afterward that she had a peculiar cervix. She stayed there two weeks and came home; did not menstruate for five weeks, then menses began and she flowed continually for six weeks, or until I saw her.

Upon a vaginal examination I found a double cervix bleeding from one side and the other side showing traces of an old trachelorrhaphy. There were two distinct masses in her pelvis, one extending towards the right side and one on the left.

Blood examination. Red blood cells,

12,000; 3,425,000; white blood cells, hæmaglobin, 50 per cent.

Urine examination. Acid, 1.020; albumin, negative; sugar, negative; microscopically, negative.

Under anesthesia, I curetted the uterus which was bleeding, and found she was having an abortion on that side. Opening up her abdomen, I found two distinct uterine bodies, each with its own tube and ovary, and not connected except with the cervix. We removed the right uterus, attached the broad ligament, round ligament and tube to the left uterus, this being easily brought over to the median line. This left the left uterus in a very good position, nearly in the median line.

She made an uneventful recovery. Four weeks after operation her menses began, lasted seven days. They have been regular, every four weeks, since. She has gained in flesh and is well, better she says, than she has been in years.

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ECLAMPSIA AND ITS TREATMENT.*

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It is doubtful if any consideration of disease therapy presents a wider diversion of opinion and ideas than that involved in the discussion of eclampsia and its treatment. Our ignorance of the true etiology of the disorder combined with the altogether empirical treatment now in vogue, is alone responsible. On the one hand, we have the advocates of strict conservatism and on the other, the advocates of immediate, radical operative treatment. We are now beginning to realize that all the symptoms incident to gestation are secondary to some substance or substances circulating in the maternal blood stream, which have their origin in the products of conception; that is from the fetus or placenta, or from the rapidly-growing uterus. The severity of the symptoms depend upon the quantity of these substances thrown into the circulation and on the ability of the mother to react to them. Heretofore all our investigations were directed to the changes found in the kidneys, liver and even the brain, and the symptomcomplex was attributed to the alteration of function in these organs. The pathological

changes found in the various organs in patients who succumb to eclampsia are at present considered secondary to the effects produced by foreign substances circulating in the blood. The nature and exact origin of these substances are as yet not definitely known. The preponderance of clinical investigation, however, points to the fact that these symptoms of intoxication are due to a protein substance found in the blood streams of pregnant women and are never found in the non-pregnant state.

The whole range of the toxemias of pregnancy and especially eclampsia should be viewed from the point of view of the circulation overcharged with foreign protein substances. In eclampsia we have many clinical manifestations pointing to this. The sudden onset of symptoms and their sudden disappearance, the sudden changes found in the urine and their sudden disappearance, the greater frequency of toxæmias in primiparas and the fact that eclampsia is more frequent in twin pregnancies tend to prove that these manifestations have their origin in the fetus and placenta. Wolff Eisner has proved positively that during pregnancy foreign protein substances are continually thrown into the circulation of the mother and that these substances under certain conditions bring about a state of eclampsia. He contends that eclampsia must be considered as the rarest and the most severe form of those symptoms dependent on the absorption of foreign albuminoids. The concensus of opinion will ultimately establish the fact that the toxemias of pregnancy are invariably due to a disturbed metabolism or to be more exact, according to Rongy, "a loss of metabolic equilibrium in the mother produced by some foreign substance originating in the fetus or placenta." Normally these foreign substances are neutralized by the formation of anti-bodies and therefore no harmful effects result in the majority of cases. If, however, the mother is unable to

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

produce a sufficient amount of anti-bodies or, on the other hand, if the production of the foreign substances is disproportionately great, the equilibrium of the maternal metabolism is disturbed, resulting in one of the forms of toxemias. Our success in the treatment of these conditions must depend primarily on the ability to recognize the premonitory signs and symptoms which are always present as a danger signal.

If we are able to recognize the definite pre-eclamptic stage, we may be able to prevent some cases of eclampsia. Some of the definite symptoms that usually suggest the pre-eclamptic stage are headache, dimness of vision, slight epigastric pain, an appreciable rise in blood pressure and appearance of albumin in the urine. These symptoms unless promptly attended to terminate in eclampsia with all its accompanying pathologic complications.

Treatment. The great advance of surgery in recent years and the safety with which entrance into the peritoneal cavity has been made, very naturally opened a new field for the relief of this condition. quite naturally the treatment of eclampsia soon became a bone of contention for those holding opposing views. The maternal and fetal mortality has always been so great that the obstetrician was very eager to avail himself of a procedure, radical in nature, but surgically, apparently, correct and based on sound reasoning. This brought forth two distinct groups of men; those advocating immediate emptying of the uterus either by vaginal or abdominal Cesarean section, and those who adopted the watchful waiting policy and treating convulsions instead of striking at the cause by immediately terminating pregnancy. We cannot treat all cases of eclampsia alike, that is, we can not treat them dogmatically, no two cases are exactly alike, we cannot have a general rule but have to individualize our patients to a certain extent. It would be very poor judgment to maintain that every case of eclampsia should be treated by radical surgical procedure, just as it would be wrong to assume that all cases of eclampsia must be let alone, and treated medically. It being the concensus of opinion that eclampsia is produced by some toxic substance circulating in the maternal blood, the origin of which is most probably in the products of conception, in order to cure the patient we must remove the cause by terminating pregnancy. By the interruption of pregnancy we, in a majority of cases, tend to help accomplish what nature has already started to do, as we all know in a great many cases of eclampsia nature tries to relieve herself of the intoxication by causing labor to set in. In the management of all obstetrical conditions there is an underlying principle, namely that our treatment should as far as possible imitate the natural processes which take place during labor and any radical departure from normal will tend to endanger the life of the patient. The method usually adopted depends on the period of gestation and the rapidity with which delivery has to be terminated as evidenced by the clinical signs and symptoms. In cases in which labor has set in delivery may be completed by manual dilatation or by dilating bags followed by forceps or breech extraction. On the other hand the explosive cases are much to be feared, they require heroic measures. The patient who presents albuminuria of slight or moderate degree with few or no kidney elements and no uremic symptoms at a time before the viability of the child, should have close observation, restricted diet and an occasional purge of calomel. This will usually carry the case along nicely. In a patient who, before the viability of the child, has a marked albuminuria and with a reduced quantity of urea and urine, but no uremic symptoms, we have a much more severe problem, for uremic symptoms with high blood pressure may occur at any time. Purgation and restricted diet, rest in bed and close observation with plenty of elimination may clear up the condition. We now come to the condition in which the child is viable and there is a severe and increasing albuminuria and many uremic symptoms, as shown by partial blindness, headache, convulsions and even coma; if coma has not set in, and absolute rest, calomel, lavage of stomach and rectum, morphine, chloral hydrate, veratrum viride and a milk diet have no effect in staying the symptoms, we should induce labor. Time is an important factor and if we miss our chance at an early induction of labor, convulsions and coma may supervene and we will be forced to a Cesarean section.

The time has now come when we must empty the uterus and do so with as little injury to the mother as possible. When convulsions have supervened the classical Cesarean section has been my choice. If there are lucid intervals and the patient looks and acts sensibly you may make efforts to carry her along by the use of the usual medication outlined above; when, however, we have no lucid intervals and coma is deep and lasting in spite of blood letting, it is a good rule to proceed to a Cesarean section because it offers the mother and child the best chances for life and is the least mutilating of all procedures for the mother. In this class of cases abdominal section has a definitely useful field; while it may add a slightly additional risk to the mother, the margin of safety for the child is so great that to my mind it justifies the procedure. Vaginal Cesarcan section in these cases should never be the operation of choice, for the operator may encounter many obstacles which will complicate the operation and which at the same time endanger the life of the child. These patients in order to have the best chance for recovery must be delivered in a minimum time and with the least possible trauma. This is not usually accomplished by adopting the vaginal route. A forcible delivery by vagina, subjects the patient to no end of severe and incurable

injuries and usually kills the child. Forcible delivery or dilatation, no matter how accomplished, means injury to the cervix, broad ligament, vagina and the pelvic floor, and is generally beyond repair. Before closing my paper I must say a few words regarding post-partum eclampsia. As a rule I worry very little about the symptoms of eclampsia coming on after delivery, they frequently occur and the reason is that the resisting power of the mother is more or less lowered and, as a rule, we may have the same amount of the foreign protein element present in the maternal circulation, but fortunately the toxicity is not so great and the exciting cause is removed you resort to elimination and the use of veratrum viride and will in all probability bring your patient around nicely. Blood letting plays an active part in the treatment of postpartum eclampsia.

306-8 Professional Building.

PROPAGANDA FOR REFORM.

TANLAC.—Tanlac (The Cooper Medicine Co., Dayton, O.) is a "tonic and system purifier" and is exploited to the public by means of extravagant and absurd claims. From an examination made in the A. M. A. Chemical Laboratory it appears that Tanlac is essentially a vinous extract which contains 15.7 per cent absolute alcohol by volume, a bitter drug (such as gentian), an emodin-bearing drug (such as buckthorn, rhubarb or cascara), a berberine-bearing drug devoid of hydrastine (such as berberis aquifolium), glycyrrhizic acid (from licorice), and flavored with wild cherry and to which has been added a relatively large proportion of glycerin. The "Tanlac Laxative Tablets," which accompany Tanlac, contained phenolphthalein. (Jour. A. M. A., June 5, 1915, p. 1930.)

LEPSO.—The A. M. A. Chemical Laboratory found this to contain bromides, equivalent to 51 grains potassium bromide per dose of one-half ounce. (*Jour. A. M. A.*, June 12, 1915, p. 2006.)

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DR. WARREN'S LETTER TO STATE SENATOR DR. J. N. FOGARTY.

We publish in this issue of The Journal a letter from Dr. E. W. Warren, a member of the Committee on Legislation and Public Policy of the Florida Medical Association, to State Senator Dr. J. N. Fogarty, Chairman of the Senate Committee on Public Health in the last state legislature. This letter is one of inquiry from one public servant to another and certainly received the courtesy of a reply—none was received.

Senator Fogarty was urged by numerous letters and telegrams from physicians and laymen of the state during the session of the legislature to present the Medical Practice Act to the Senate, and during the last week of the session was overwhelmed by telegrams, begging him to call the measure before the Senate even if he thought it would meet ignominious defeat. The Committee on Legislation and Public Policy wished to have an expression of opinion of the State Senate on the measure, as the House of Representatives had passed it with some amendments.

Senator Fogarty, as far as we are advised, has never replied to any of these messages or given any reason for his action in allowing the bill to die in his committee.

The medical profession of Florida, we believe, is entitled to an answer from the Senator relative to his attitude in this matter and the columns of The Journal are open to him for reply.

BIOLOGICAL PRODUCTS.

At a recent meeting of the Duval County Medical Society a committee consisting of Dr. Charles E. Terry, Dr. J. D. Love and Dr. M. B. Herlong was appointed to investigate the manner in which the drug houses of Jacksonville handle biological products and Bulgaria tablets or suspensions. The committee has since handed in their report, which is so complete and of such interest to the readers of The Journal

that we are pleased to publish the summary accompanying the report which gives a list of the drug houses carrying a stock of biologic products and Bulgara tablets or suspensions, and indicating whether or not the products are kept on ice. The firms marked with an asterisk purchase direct from the manufacturer; those not so marked purchase through jobbers:

In Ice Box.

Bettes Pharmacy.*
J. D. Boone.*
Thos. Clarke.
Eccles & Co.
S. E. Smalls.*
Gary's Pharmacy.*
R. W. Bennett.*
W. D. Jones.*
Cherry's Pharmacy.
Hogan Street Pharmacy.*
Groover-Stewart Drug Co.*
McDonald.*

Not In Ice Box.

McNeil's Pharmacy.
Subway Drug Co.*
S. Dunlap.
Imperial Drug Co.*
Duval Pharmacy.
Norton's Pharmacy.
Davidson & Withers.
Quaintance & Baines.
Adams Street Pharmacy.
H. R. Thomas.
Paschal & Paschal.*
Hays Pharmacy.*
Highway Pharmacy.*
Southern Drug Co.*

VACCINE THERAPY IN TYPHOID FEVER.

"It is difficult to arrive at a just estimate of the value of vaccines in the treatment of typhoid fever, because the evidence for and against their use is derived from two widely different sources. From a theoretical standpoint, such a procedure has little justification. It is well known," says *The Journal*

of the American Medical Association, "that there is an extensive invasion of the blood by the infecting organism early in the course of the disease, and it seems reasonable to assume that these invading organisms furnish sufficient antigenic stimulus to cause the maximum antibody formation. On the other hand, if this antibody formation is delayed early in the course of the infection, vaccines may be of value in stimulating such a response. In the field of clinical medicine. many observers have reported striking results from the use of vaccines, and it is the common opinion of these clinicians that they are efficacious in the treatment of typhoid fever.

"The clinical data in the literature pertaining to this phase of the treatment of typhoid fever has recently been reviewed by Krumbhaar and Richardson of Philadelphia. This analysis includes more than 1,800 cases. and in 95 per cent of these, favorable results were observed. Thirty-five of the thirtynine observers concluded that the vaccine was useful as a therapeutic measure. almost all instances, the course of the infection was favorably influenced, and in many series the mortality was reduced. In a series treated by Petrowitch, the mortality was 3.2 per cent, as compared with 8 per cent in 220 unvaccinated patients. Krumbhaar and Richardson used vaccines in the treatment of ninety-three typhoid patients in the Pennsylvania Hospital during the past three years. Their results were so promising that they consider the use of vaccines an important procedure in the routine treatment of the disease. The symptoms were rarely altered beyond a transitory rise in temperature; but relapses and complications were diminished in frequency, and when vaccine treatment was instituted early in the course, there seemed to be a favorable influence exerted on the intensity of the infection. Since agglutination is often absent during the first two weeks of the attack. these investigators assume that antibody

formation is often delayed, and that by the use of vaccines an early activity of this process can be brought about. The experiments of Gay and Claypole also suggest that there may be a hyperleukocytosis following the injection of a vaccine during the course of typhoid fever. Should these experiments receive confirmation, a good theoretical basis would be afforded for vaccine therapy in typhoid.

"The type and dosage of the vaccine have had no apparent influence on the results obtained. Sensitized vaccines have been strongly advocated by Besredka, Metchnikoff, Garbat and others, and on theoretical grounds such vaccines would be favored; but the majority of investigators have had good results with suspensions of dead bacteria prepared according to Wright's Although autogenous vaccines method. generally have been preferred, stock vaccines prepared from organisms selected for their high agglutinogenic power have been efficacious in the hands of many. Reports, however, have been so uniformly favorable with all preparations, that it seems as if the type used is of secondary importance. The dosage has also varied widely with different investigators. Semple, Waters, Petrowitch and others used small doses, while Foster, McArthur, Fletcher and Meakins obtained equally good results with large doses. Krumbhaar and Richardson gave 500 million as an initial dose and two or three larger doses at short intervals. They conclude that their results were more favorable in the cases in which large doses were given. The dosage, however, must be gaged by the general condition of the patient. When the patient is very toxic, only small amounts of vaccine can be used with any degree of safety. Previous mention has been made of the remarkable results obtained by Ichikawa from the intravenous injection of sensitized vaccines. Using this method of inoculation. he was able to produce a rapid drop in the temperature to normal and often an early

recovery. In his cases, mild intestinal hemorrhages occurred in a few instances following the injections; but these hemorrhages were no more numerous than in the unvaccinated patients. Subsequent investigators also report favorable results from the intravenous method of administration of the vaccine, but they strongly emphasize the danger of a severe general reaction in some Signs of collapse, severe instances. diarrhea and intestinal hemorrhages are complications which have occurred simultaneously with the rapid fall in temperature, and in a few instances there was an unfavorable termination. The ultimate value of this method of administration of vaccines, therefore, is a question which further observations must determine.

"Including the recent encouraging reports of Goldscheider and Anst. Rheim and others, the clinical evidence now at hand is derived from careful observations on about 3,000 cases of typhoid fever treated with vaccines. In almost all instances, it seems that some degree of favorable influence could be noticed from their use. observations of Elmer indicate that vaccines will not prevent the attack, once infection has begun; but it seems probable that their use early in the course of the disease modifies the duration and intensity of the Furthermore, in complications, especially localized typhoid infection such as periostitis and cholecystitis, and in the treatment of typhoid carriers, vaccines are of limited value. In local infections in which there is a secondary invading organism, as in pneumonia and otitis media, typhoid vaccines are probably contraindicated.

"Careful bacteriologic and serologic study is an essential prerequisite to vaccine therapy, which requires an exact etiologic and early diagnosis. Before the question of the efficacy of this form of treatment can be settled fully, the mechanism of the action of vaccines in generalized infections needs to be better understood; obviously, this is

a problem in the field of experimental medicine. In the meantime, the results at hand, which indicate that, used with discretion, vaccines not only do no harm, but also may be of benefit, should stimulate to further and careful observations."

INTERPRETATIONS UNDER THE HARRISON NARCOTIC LAW.

"Treasury decision 2213, issued June 7th by the commissioner of internal revenue, establishes a new ruling on Section 6 of the Harrison Narcotic Law, the section exempting certain proprietary preparations from the operations of the law. The section provides that preparations and remedies which do not contain more than 2 grains of opium or more than one-fourth grain of morphin or more than one-eighth grain of heroin or more than one-eighth grain of codein, etc., shall be exempt from the provisions of the act. The decision discusses the question as to whether or not 'prescriptions' come within the definition of 'preparations' or 'remedies' as given in the act. The commissioner says:

"'The word "preparation" as generally used and understood means ready-made or prepared medicines, and the word "remedies" means that which cures or is efficacious in a specific disease or diseases under all conditions, while the term "prescription" is the written directions or recipe of a physician for the compounding or preparing of a medicine and directions for its use to meet the existing conditions in the case of a particular patient.'

"Under this interpretation," says The Journal of the American Medical Association, "the commissioner holds that the exemptions in Section 6 do not apply to prescriptions written by registered physicians unless such a prescription is written for a preparation or remedy prepared in accordance with the U. S. Pharmacopeia, National Formulary or other formula, or for a 'remedy or preparation' prepared under

private or proprietary formula, carried in stock by a dealer, which may be dispensed without a 'prescription.' Accordingly, the commissioner directs that every prescription containing a narcotic drug in any quantity, unless it is for a preparation prepared in accordance with the U. S. P. or National Formulary, must have indicated on the prescription the name and address of the patient, the date, the name and address of the physician and his registry number. Such prescriptions can not be refilled, and must be kept on file by the druggist filling them for a period of two years.

"This ruling draws exactly the same line in medical preparations that exists between ready-made clothing and clothes made to order. A preparation which is put up in accordance with a distinct formula and which is recognized as a definite preparation is exempt, provided it contains less than the minimum quantity of drugs. A physician's prescription, being written to order for an individual patient for a specific purpose, is not exempt, no matter how small an amount of the prescribed drugs it may contain. The practical effect of this decision is, that under it, physicians must include, in all prescriptions containing any opium or cocain or any of their derivatives, the name and address of the patient, the date, and the name, address and registry number of the physician.

"At first glance, this decision will doubtless impress physicians as being a discrimination against them and in favor of proprietary preparations. This is true, but it is because the law, as it passed congress, discriminated against physicians and in favor of 'paten't medicine.' Section 6 of the Harrison law represents the political influence of the 'patent medicine' manufacturer in congress. It should never have been included in the law. Its insertion weakened the law and was due solely to the inability of the members of congress to resist the pressure from 'patent medicine' interests.

This section must be repealed; so long as it stands, the Treasury Department has no choice but to enforce it. To use an exemption clause drafted at the dictation of the 'patent medicine' interests to exempt physicians' legitimate prescriptions would be an absurdity. There should be no exemptions of any kind under this law. Every preparation of any kind, containing any amount of opium or cocain or any of their derivatives, should be subject to the operation of the law. Physicians have never asked that their prescriptions should be exempt. The demand for such exemptions comes solely from the proprietary and 'patent medicine' interests; to satisfy these interests, the special exemption was made.

"It has often been said that the best way to repeal unwise laws is to enforce them, rigidly and impartially. Section 6 of the Harrison law should be repealed at the earliest opportunity. Until this is done, it should be enforced. Physicians certainly do not wish to have their prescriptions put in the same category as 'patent medicine' fakes and frauds. Let the dope containing 'patent medicine' stand on its own merits, if it has any, and let it be distinctly separated from the prescriptions of reputable physicians. With this understanding of the recent decision, the position of the Treasury Department should receive the approval of all physicians."

THE BAKING-POWDER PROBLEM.

For a number of years there has been much discussion with regard to the effects of baking powders on the health. While minor objections have been urged against all baking powders, the principal charge of unwholesomeness has been made against baking powders containing alum. This objection is based primarily on the injurious effects of large quantities of aluminum salts. To this objection the answer has been made that the process of decomposition which liberates the leavening gas when alum bak-

ing powder is used, produces an oxid of aluminum which is insoluble, and hence not injurious. For the facts in this matter to be fully understood, it must be remembered that the so-called alum now used in baking powder is not the alum used in medicine, being a sodium alum (sodium aluminum sulphate) instead of the official potassium salt. This point is held by some to be important in view of the effects of potassium salts on the system. Cream of tartar is a potassium salt, being potassium acid tartrate.

In the discussion of the baking-powder question, it must be remembered that the practical application of the facts concerns only small amounts of these salts and contemplates an occasional and not a constant use. Few people habitually consume breads made from baking powder, hence the amount of potassium introduced into the system by baking powder is unlikely to be of serious moment as regards health. Potassium salts are frequently taken as constituents of vegetable food, and vet there is no evidence that they disturb metabolism in any way. The question whether alum used in this way is injurious has been settled by the investigations of the Referee Board of Scientific Experts appointed by President Roosevelt, and its decision may be considered as coming from the court of highest authority. The investigation of this board covered a period of several years and was the most extensive single investigation ever conducted as to the healthfulness of alum baking powders. The distinguished character and personnel of the board itself lends additional weight to its findings. board consisted of the following men:

Dr. Ira Remsen, president of Johns Hopkins University.

Dr. Russell H. Chittenden, professor of physiological chemistry, Yale University, and director of the Sheffield Scientific School.

Dr. John H. Long, professor of chemistry in the Northwestern University Medical School.

Dr. Theobald Smith, professor of comparative pathology, Harvard University.

Dr. Alonzo E. Taylor, professor of physiological chemistry, University of Pennsylvania.

The board made the following findings: "Aluminum compounds when used in the form of baking powders in foods have not been found to affect injuriously the nutritive value of such foods.

"Aluminum compounds when added to foods in the form of baking powders, in small quantities, have not been found to contribute any poisonous or other deleterious effect which may render the said food injurious to health. The same holds true for the amount of aluminum which may be included in the ordinary consumption of aluminum baking powders furnishing up to 150 mg. (2.31 grains) of aluminum daily.

"Aluminum compounds when added to foods in the form of baking powders, in large quantities up to 200 mg. (3.09 grains) or more per day, may provoke mild catharsis.

"Very large quantities of aluminum taken with foods in the form of baking powders usually provoke catharsis. This action of aluminum baking powders is due to the sodium sulphate which results from the reaction.

"The aluminum itself has not been found to exert any deleterious action injurious to health, beyond the production of occasional colic when very large amounts have been ingested.

"When aluminum compounds are mixed or packed with a food the quality or strength of said food has not been found to be thereby reduced, lowered or injuriously affected."

In short, the board concludes that alum baking powders are no more harmful than any other baking powders, but that it is wise to be moderate in the use of foods that are leavened with baking powder.

In Dr. Taylor's conclusions, a different aspect of the baking-powder question is brought out. It is shown that the product of all forms of baking powders is laxative, and the suggestion is made that the laxative effects of the continuous use of breads made

with baking powder may be injurious. The objection applies to the cream of tartar baking powder which leaves a residue of Rochelle salts, to the phosphate baking powders which leave the phosphate of sodium and to the alum baking powders which also leave the sodium sulphate. Dr. Taylor says: "Apparently, therefore, at present at least, the use of baking powder is associated with the introduction into the alimentary tract of a certain amount of saline cathartic, the salt differing with the use of a particular type of baking powder." In connection with this objection, the amount of soluble residue left by the decomposition of the baking powder becomes of importance.

Here, again, the pertinence of the objection depends on the quantity likely to be eaten. In no case is it likely that a person would consume bread or biscuits enough to get an appreciable effect on the bowels from the laxative produced.

The criticisms with reference to the action of baking powders indicate a tendency to magnify quite incidental matters whenever they seem to favor the interest of one or other manufacturer. Thus the tartrate was at one time highly regarded because it was a product which was destroyed in the system, leaving a natural constituent of the body, that is, potassium carbonate. More recently it has been discovered that the tartrates are only partially metabolized in the system, removing the supposed advantage of the tartrate powders. On the other hand, there is a disposition to emphasize experiments tending to show the power of tartrates to affect the kidneys injuriously, although there is no evidence that such an injurious action can occur from the small quantity present in baking powders. While the objections to alum are unjustified, the physician will do well to inquire carefully into the probability of any alleged injury occurring from other forms of baking powder .- The Journal of the Indiana State Medical Association.

Cancer Departmemt

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

THE CAMPAIGN AGAINST CANCER IN NEW ENGLAND.

The New England states generally show a higher death rate from cancer than any other group of states. This does not mean that New England people are more susceptible to this disease. Cancer is a disease of later adult life and it is well-known that in parts of New England there are more old people proportionately to the population than in many other regions. Nevertheless, the death rates recently published by the United States Census Bureau have stimulated much activity in these states in the educational campaign for the control of malignant disease.

What are the facts upon which this movement is based? According to the report of the Census Bureau, in 1913 there were 49,928 deaths from cancer in the registration area of the United States, corresponding to a death rate of 78.9 per 100,000 of the population.

All the New England states have individual cancer death rates much higher than this. Connecticut's rate, which was the lowest of any of the New England states, was 85.1. Vermont's rate was the highest, with 111.7, while the rates of the other states were correspondingly high; Maine having a rate of 107.5, New Hampshire 104.4, Massachusetts 101.4, and Rhode Island 93.3. When these figures are compared with those of Kentucky, with a rate of 48, they seem indeed very high. They mean that 6,817 people died in 1913 in New England from cancer. But it does not necessarily follow that cancer is more common in New England than elsewhere. The Census Bureau attributes the high cancer death rates in certain districts to the relatively high age distribution of the population and the negligible amount of immigration. Translated into every-day terms this means that in New England the proportion of people over forty years of age, or at the cancer age, to those under forty, and so less liable to cancer, is greater than in other places. Yet there is no doubt that the cancer death rate in New England as well as in other parts of the country is much higher than it ought to be. Without question a large percentage of cancer deaths can be prevented by early recognition of the symptoms and prompt recourse to competent surgical advice and treatment. Cancer is not a hopeless incurable affection, as so many people wrongly believe. Those who know the facts believe that if the public can be properly educated in regard to the early signs of the disease and will act on this knowledge, the present mortality should be reduced at least half and perhaps two-thirds.

That New England is awake to this opportunity of saving lives is evident from the activity in several states. To protest against taxation without representation the patriots of Massachusetts dumped overboard the famous cargo of tea. Vermont medical men have become so concerned over the high cancer death rate of their state that they are going to hold a "teaparty" of another sort and attempt to dump overboard the high death rate from malignant disease. While their action is not so dramatic as that of the patriot raiders they hope to prove that through its great ultimate benefit to the community it will be almost as patriotic. The New Hampshire State Board of Health has recently published sound advice in its Bulletin. In Maine an active committee of the State Medical Society is arranging public lectures and causing the publication of instructive articles in the newspapers. Massachusetts has a well-organized branch of the American Society for the Control of Cancer with headquarters in Boston. The Vermont State Medical Society has arranged a series of public meetings to spread the bad news of the high cancer death rate and the good news of the hope of controlling the disease by earlier recognition and prompt surgical treatment. The Vermont State Board of Health will send its Secretary, Dr. Charles F. Dalton, to address each of these meetings and the American Society for the Control of Cancer will be represented by Dr. Francis Carter Wood, Director of Cancer Research at Columbia University, New York City, and by Dr. J. M. Wainwright, Chairman of the Cancer Committee of the Pennsylvania State Medical Society.

COMMUNICATION

The following letter was recently addressed to Senator J. N. Fogarty by Dr. E. W. Warren, a member of our Committee on Legislation and Public Policy:

"June 9, 1915.

"Dr. J. N. Fogarty, Chairman Committee on Public Health, Key West, Fla.

"My Dear Senator: As you are well aware, the people of the state failed again to get the legislation they had set hopes upon in the way of medical legislation. had been at a loss for a leader in the Senate. but when you, as Chairman of the Public Health Committee, consented to introduce the bill, a wave of hope spread among us all. As one of the recognized leaders in the state in your profession, as a former member of the Regular Board of Examiners and as a well-informed citizen, it was thought you would be more familiar with our needs than almost any man in the state. We felt that our bill could scarcely have gotten into better hands.

"The bill was introduced in both houses early in the session. Then began the long and expectant watching of journals for its advancement. Eventually it was reported out by the House committee favorably. No news from the Senate. After the session was two-thirds gone it was passed by the House by a good safe majority but with amendments that greatly modified its efficiency. Then again the watching for action by the Senate, that would eliminate the objectionable amendments, but we were doomed to disappointment. Nothing was ever heard from it from that end of the capitol.

"Now we want to know the reason. If we are ever to secure legislation that will bring system out of the present chaotic condition of our medical laws we must know where the pitfalls are. In view of the splendid activity of the Senate Public Health Committee in matters relating to public health and the enormous amount of good resulting thereby we are at a loss to know why medical regulation bills received such a frost. If our bill was defective, which I suspect was true in some degree, we want to know it. If it was due to an overwhelming influence of the chiropractors and others of their ilk as was the case in the House, we would like to know it.

"Practically all the states have within the last few years passed modern medical laws and each one of them renders our position successively more untenable. Our state is becoming more and more the dumping ground for incompetents, the flotsam from low-grade medical schools that cannot get admission to examinations in other states. Through lameness in our laws charlatans, quacks and exploiters find this an inviting field. The people suffer thereby and our profession is brought by them into a certain degree of disrepute.

"Improved medical legislation was less opposed this time by the other schools than ever before. We had reached a degree of friendliness and understanding with the other schools never attained in any of our former efforts. We felt this time was propitious and that we would be rewarded for the many previous disappointments. We thought the House would be our main obstacle. With three physicians in the Senate there was never a thought of trouble from that source.

"Please give us any information you can. The benefit of your experience there may put us in the way of success two years hence. We desire to publish this letter in The JOURNAL OF THE FLORIDA MEDICAL ASSO-CLATION and would like the privilege of publishing your reply.

"Yours truly,

"(Signed) E. W. WARREN,

"Member and until recently Chairman Committee on Legislation and Public Policy, Florida Medical Association."

Reviews from Current Literature

MILITARY SURGERY

Drennan, W. Earle: Experiences in Military Surgery. J. A. M. A., 1915, Vol. 65, p. 296.

Drennen contributes a most interesting article concerning his experiences in the American Ambulance Hospital in Paris during 1914-15.

He states that the degree of shock exhibited by the soldiers is much less than that seen in civilians sustaining similar injuries. He believes that the mental attitude is responsible for this difference; that "the wounded soldier, while discouraged and suffering, sees visions of a comfortable bed and pleasant surroundings, feels himself somewhat of a hero, and escapes at the same time from the ever-present spector of impending death. In the mind of a civilian similarly injured, the mental picture is entirely different. He begins immediately to grieve over a multitude of troubles, loss of wages or position, and in civil life, gunshot injuries are not infrequently attended with shame and chagrin to the sufferer."

He states that the modern rifle ball, despite all claims to the contrary, is remarkable for its severe and mutilating trauma; while the wound of entrance may be small, the wound of exit is usually large and extensively lacerated. For this reason claims have been made that dumdum or explosive bullets have been used. The writer remarks that nearly all of the modern bullets have an effect similar to the explosive bullet, since they rotate in the air upon their longitudinal and transverse axes because their center of gravity is well back towards the base of the

bullet. He mentions cases in which the ball has struck, apparently, base first. He comments on the terrible efficacy of modern artillery, and states that shrapnel wounds are more frequent than rifle injuries; are usually multiple and most frequently carry clothes and dirt into the wounds.

He states that fully 95 per cent of all wounds coming into the base hospitals are infected. In addition to the ordinary pus infections, tetanus and gas gangrene are common; he gives an illuminating picture of the latter: "Clinically, gas gangrene presents a striking feature. In all cases seen by me the progress began in an extremity, and in every instance there had been a serious primary injury to the great vessels of the limb. There was a rapid spreading of the process, with an increasing area of anesthesia, often involving the entire limb within thirty-six hours. In some cases there was a fairly distinct line of demarcation; in others. the infection was progressive and extended to the trunk and became generalized.

"Gas gangrene, contrary to moist gangrene, begins at the edges of the wound and not at the periphery. The edges are at first an angry red, later become greenish, and, finally, turn black. The skin is cold and clammy, of a dark, bluish-black color, with many large blebs on the surface, and the whole affected extremity is enormously swollen. Crepitation may be felt on palpation, and the tissues to the touch give a peculiar pulpy, boggy sensation. If incised, a flow of dark bloody fluid results, which contains

many bubbles of gas. The gas may be seen to bubble up from the tissue planes into the wound when pressure is exerted thereon. In drawing blood for a blood culture in cases in which the infection has become systemic. many bubbles of gas may be seen to flow into the receptacle directly from the vein. At necropsy, myriads of bubbles may be seen in the mesenteric vessels. Dr. Benjamin Jablons, pathologist at the American Ambulance Hospital in Paris, demonstrated to me a phenomenon first observed by himself, namely: the presence of very small subperitoneal blebs, or vesicles, mostly of the intestines; but also beneath the parietal peritoneal membranes, which first make their appearance from four to five hours after death. So far as I know, they are peculiar to this condition."

No efficient treatment for gas gangrenes has been found, though English writers report a few cures by injecting a healthy zone well above the infected area with neutral hydrogen peroxid under pressure. The writer believes that the best results are obtained by multiple incisions and free drainage.

Infected compound fractures were all treated by free incision, removal of all foreign bodies and loose pieces of bone, and efficient drainage maintained over a long period of time. The use of any type of foreign material, such as wire, plates or nails, is contraindicated. The limbs are maintained by extension traction and proper fixative apparatus.

It is interesting to note that as a basis for the work of the sanitary and ambulance troops on the firing line, the battle injuries of the present war are as follows:

Percentage.
Killed
Nontransportable—serious head and ab-
dominal injuries 8
Requiring transportation32
(20 per cent sitting up.)
(12 per cent recumbent.)
Slightly wounded—able to walk40

The regional distribution of injuries in battle has been estimated as follows:

		Mortality
Pe	rcentage.	Percentage
Head	15	51
Neck	5	18
Perforating spine	5	75
Perforating chest	4	25
Perforating abdomen.	3	65
Upper extremities	25	2
Lower extremities	30	5
		R. C. T.

DIAGNOSTIC TUBERCULOSIS INOCULATIONS

Damask and Schweinburg: Beschleunigter Nachweis der Tuberkulose im Tierversuch durch Milzimphung. M. M. W., 1915, No. 20, p. 679.

The intraperitoneal injection of suspected material is reliable. The only fault to be found with this test is the length of time that must elapse before the inoculated animal may be examined for the specific nature of the inoculated material. In recent vears numerous endeavors have been made to shorten this period. Oppenheimer chose the liver for the injections. His experiments demonstrated regularly that after sixteen days (sometimes earlier, even after five days in some cases) miliary tubercles could be shown in the liver and spleen, and the splenic involvement was often more pronounced and earlier than the hepatic involvement. These observations induced the authors to inject the spleen with suspected tuberculous material. The technic of the inoculation offers no special difficulties. The quantity to be injected should not exceed $1-1\frac{1}{2}$ c.c. because of the small size of the spleen. Examination through laparotomy offers the advantage that it may be done early, and, if findings be negative, that it may be repeated subsequently.

Exudates and urinary sediments may be injected without special preparation. Sputum is first placed in a thermostat until autolysis has taken place. Then is added an equal amount of 10-15 per cent anti-

formin solution and shaken until the whole becomes homogeneous. After centrifuging the sediment is mixed with a little normal salt solution and injected.

After injections with pure culture tuberculosis of spleen could be demonstrated regularly at the end of a week, and often as early as the fifth day. In extreme dilutions twelve days are required. Following injections of sputum, urine, pleuritic and peritoneal exudates, best results are obtained by waiting two weeks for development.

Г. Т.

THE PHENOLSULPHONEPHTHALEIN TEST

Elliot, Arthur R.: The Phenolsulphonephthalein Test in Chronic Nephritis. J. A. M. A., Vol. LXIV, 1915, p. 1885.

Many considerations render the study of renal function in detail an extremely complex problem. To base conclusions on differential tests assumed to reveal glomerular, tubular, or vascular impairment necessarily implies that we can test the individual functions of the kidney, and presupposes a much more definite knowledge of the physiology of that organ than we in fact possess. As the matter stands, the only methods available for clinical usage are such as furnish information regarding the total function of the kidneys—their general excretory capacity.

General agreement accords first place among these tests to the phenolsulphonenephthalein test of Rowntree and Geraghty. It was at first employed most extensively in surgical cases, especially with reference to the question of operations on the urinary organs. It is equally applicable to medical cases, but the results are considerably more difficult of interpretation. In interpreting its findings it is to be remembered that the test shows the functional powers of the kidneys at the time of observation and for that time only. The influence of passive renal congestion from cardiac causes is to be borne in mind. If excretory values are low and cardiac insufficiency be not present

as a complicating factor, we should not disregard the warning simply because clinical indications of uremia are absent, and, on the other hand, if symptoms indicate danger, their significance is not to be neglected merely because phenolsulphonenephthalein excretion approaches normal.

It is extremely doubtful whether the test should be employed to any important extent in the diagnosis of nephritis. Routine observations with the method show an output well within the normal requirements in the majority of cases classed as nephritis with good cardiac compensation.

Perhaps the most important service this test may render us in nephritis is in the diagnosis of obscure uremic conditions. During the course of any case of chronic nephritis there may arise disturbances, the uremic nature of which may be strongly suspected. Without loss of valuable time the phenolsulphonenephthalein test will reveal promptly the degree of uremia present

A type of case that often presents some difficulties in diagnosis is so-called cardiorenal disease. It is not always an easy matter to estimate the relative importance of the cardiac and renal moieties and to decide whether to regard the case from one or the other angle. The renal insufficiency test will be of assistance in elucidating this point.

The test will also prove of value when employed at periodic intervals in keeping track of the progress of a case and as a more accurate means of watching the effect of treatment that we possess by other means. By applying the test at intervals, the rise and fall in function index forms an interesting and possibly significant chart,

In the treatment of nephritis the dietary is dominated by the principle of protein restriction. Routine observations with this readily available test will enable us to appreciate with greater precision than is possible from clinical observation alone the point where positive protein restriction becomes necessary. When the functional index is normal or nearly normal in contracting kidney, it is difficult to understand what harm will result to the kidneys, provided no inflammatory element is present, from a protein ration based on physiologic requirements. Aided by periodic functional testing to check up the functional integrity of the kidneys, and with our present knowledge of physiologic food requirement for good nutrition, the diet therapy of chronic nephritis may be adopted with reasonable safety, if not perhaps with accuracy, and with due realization that in so chronic and widespread a disease general nutrition and kidney conservation should stand on a parity. т. т.

ABDERHALDEN TEST

Falls, Frederick H.: The Present Status of the Abderhalden Test. Jour. A. M. A., 1915, Vol. LXIV, p. 1898.

The author divides the workers in this field into three groups.

1. Those who support Abderhalden's contentions entirely and believe that an absolute diagnosis can be made by it.

The majority of these men are either new workers in this field, or are men connected with commercial laboratories.

2. Those who believe that the method is of no possible value in diagnosing pregnancy or any other condition.

These men show by their statements that either they have not done enough work to know whereof they speak, or else that their technic is so poor that they can not obtain results with any test requiring a knowledge of serology.

3. Those who believe that, while the ferment content of the blood is undoubtedly increased in pregnancy and certain other conditions, the specificity of the ferments as maintained by Abderhalden is not proven as yet; and in the light of the most recent work is highly improbable.

These men, among whom the author

classes himself, consider that while the test may be of value in diagnosis in a given case it is by no means infallible.

Much work, especially by Jobling, Eggstein, and Petersen, has recently been done on the test and evidence has been produced which, if substantiated, will destroy some of the underlying principles of the Abderhalden theory.

In general the present status of the test seems to be as follows:

It is not a specific and infallible test for the diagnosis of any condition.

A negative reaction in a given case is of great value as speaking against the possibility of pregnancy.

A positive reaction is of much less diagnostic value than a negative reaction.

While the ferments are increased in the blood during pregnancy there is as yet no positive way in differentiating between these ferments and the ferments mobilized in many pathologic conditions.

While the test should be done in all cases in which the diagnosis of pregnancy is in doubt, the results should be regarded only as corroborative evidence together with other clinical phenomena. G. R. H.

TECHNIC IN HYSTERECTOMY

Tyler, George, T.: On the Importance of Destroying the Cervical Mucosa in Sub-total Hysterectomy as a Cancer-preventing Measure. Southern Medical Journal, July, 1915, Vol. VIII, p. 583.

The author details a case in which cancer occurred in the cervical stump six years after a sub-total hysterectomy. He considers the frequency of malignant degeneration in the cervical stump. To find out the frequency in this country he sent a questionnaire to 400 American surgeons.

From the replies received he collected 75 cases; from other sources in this country, 25 cases. From the reports of European observers, there are 114 cases. This makes a total of over 200 cases reported, much larger than one would suppose.

Various methods may be used to prevent

malignant degeneration of the stump. Removal of the mucosa by excision is favored by some operators. Total hysterectomy is advocated by others.

The use of caustics promises little more than destruction of the superficial cells. In removing the mucosa surgically it should be remembered that cancer of the cervix occurs most frequently at the portio vaginalis and the excision of the mucosa must include that portion.

While many surgeons advise the sub-total operation the complete hysterectomy is undoubtedly being performed much more frequently than it was a few years ago. Often this is done especially to prevent a subsequent malignant degeneration as well as trouble from leucorrhea. The total operation is undoubtedly the ideal operation but it has an increased morbidity and mortality.

In conclusion the author presents a tabulated list of the opinions and methods of 123 American surgeons on this subject.

G. R. H.

EPIDEMIC POLIOMYELITIS

Flexner, Simon: The Mode of Infection and Etiology of Epidemic Poliomyelitis. Am. Journal Diseases of Children, 1915, Vol. IX, p. 353.

The mode of infection and the nature of the specific microorganism are briefly dis-The notion of insect carriage, which for a time was generally accepted, was founded on imperfect foundation. The infection is conveyed through personal contact and the virus has been detected on the nasal buccal and pharyngeal mucous membranes. The class of individuals who may possibly distribute the disease is much larger than has previously been suspected. Those who may convey the disease are (1) the frankly ill, (2) the slightly ill, the so-called abortive or ambulant cases which present so few symptoms as to escape detection, (3) the healthy carriers, or those who have been intimately exposed to the disease, as the parents of a paralyzed child, (4) chronic

carriers, or those who have recovered from an acute attack, but who at the expiration of several months still harbor the virus.

All measures put into effect to prevent the spread of epidemic poliomyelitis should be based on a conception of the personal factor as paramount and not on the notion of insect carriage.

The virus, or microbic agent of epidemic poliomyelitis has been cultivated, is filterable and consists of minute globular bodies capable of being viewed under the high powers of the microscope.

J. D. L.

INTRACRANIAL HAEMORRHAGE IN THE NEWBORN

Green, Robert M.: Intracranial Hæmorrhage in the Newborn. Boston Medical and Surgical Journal, 1914, Vol. CLXX, p. 682.

Intracranial hæmorrhage in the newborn may be due to trauma of labor or be associated with hæmorrhagica neonatorum. Symptoms appear from the second to fourth day in a baby, who, at birth, is apparently normal and evinces little or no evidence of external injury. If symptoms appear late the bleeding is usually venous and of slow oozing character. The signs of intracranial pressure are seldom typical as in an adult. seldom what one might a priori expect, yet they constitute a clinical picture distinct and definite when once recognized. Reflex and motor phenomena are unreliable guides to diagnosis, and subdural hæmorrhage may occur without producing the classic signs of either intracranial pressure or traumatic tetanus.

From observation of over twelve cases the author believes a presumptive diagnosis of intra-cranial hæmorrhage may be made in any baby who, with an adequate history, within a few days of birth becomes pale, refuses the breast and shows a peculiar, though slight, facial ædema. This latter sign is presumably due to back pressure from within the skull on superficial veins, emptying into the dural sinuses. For further confirmation lumbar puncture or aspiration

of the subdural space is indicated. If hæmorrhage is over the cerebral convexity cranial puncture will reveal the presence of blood, while if hæmorrhage is below the tentorium and along the base lumbar puncture will reveal its existence. The majority of intracranial hæmorrhages in the newborn are subdural rather than intraventricular, and if aspiration fails to give relief operative decompression is indicated. Seven case histories are detailed as bearing on the cardinal diagnostic points of this condition.

J. D. L.

MENSTRUATION AND BREAST MILK

Grulee, Clifford G., and Caldwell, T. C.: The Influence of Menstruation on Breast Milk. Am. Journal Diseases of Children, 1915, Vol. IX, p. 374.

The authors refer to the meagerness of literature on the relationship of menstruation and the quantity of maternal milk secretion.

A case is reported of a baby born with harelip and cleft palate, nursed for nine months on milk secured from the mother's breast by means of a specially devised breast pump. The quantity of milk secured was carefully measured and it was shown that, beginning with the first day of menstruation and lasting from ten days to two weeks thereafter, there was a definite increase in the amount of breast milk. There then occurred a diminution in the quantity which reached its lowest point four to seven days previous to menstruation, after which there was a gradual increase.

J. D. L.

MIDDLE EAR INFECTION

Borden, Charles R. C.: Systemic Infection of Middle Ear Origin. Annals of Otology, Rhinology and Laryngology, 1915, Vol. XXIV, p. 1.

"Systemic infections of middle ear origin, exhibited by a rise of temperature in every-day practice, are too well known for

disease they are the second most common complication to arise, but are not important in the mild cases except in so far as the function of the hearing apparatus is endangered. In severe cases, particularly in scarlet fever, when they occur in conjunction with complications in other organs, aural diseases assume a role of importance, which is not commonly recognized. Lest he be misunderstood in the matter, the writer wishes to state that he does not claim middle ear disease to be a primary source of infection in the heart, lung, joints, kidney, etc., but that when it occurs in conjunction with other organic complications, the influence of acute otitis media or mastoiditis is very great. We know that scarlet fever inhibits the resistance to streptococus infection. If then the middle ear or mastoid become an added focus of infection to an already prostrated patient, the result must of necessity be a further increase of bacterial invasion. For example: In the event of inflammation in the heart or kidney, should the middle ear or mastoid give rise to the absorption of fresh toxines into the circulation, the already inflamed heart or kidney is still further called upon for increased activity. If the original infection was all the organ could withstand and continue to functionate properly, the secondary infection from the ear may be sufficient to completely overwhelm it and cause death to ensue as a direct result of the added toxemia from the ear."

further discussion. In the three contagious

The author presents several cases operated upon by him, showing very striking results during convalescence where "vital organs functionate properly, temperature is normal, the surroundings and treatment of the case are of the most approved fashion; yet the progress of the patient remains at a stand-still. In selected cases the one and only abnormal symptom present is a chronic aural discharge." W. S. M.

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ORIGINAL ARTICLES

RELAXED VAGINAL OUTLET, ITS DIAGNOSIS AND TREATMENT.*

GERRY R. HOLDEN, M. D., F. A. C. S., Jacksonville, Fla.

The bony outlet of the pelvis is closed entirely by a strong diaphram of muscles. These muscles arise from the body and rami of the pubes and ischium, the greater tuberosity of the ischium, the sacro-sciatic ligament, and the coccyx. The fibres of these muscles interlace in the median line with one another forming, as said above, a muscular diaphram, pierced in the female by the urethra, vagina and rectum.

The muscles, on account of their origin and insertion, exert a sling like action and tend to support and pull the vagina, rectum and urethra. The largest and most important of these muscles is the levator-ani.

If we examine the perineum of a normal multiporous woman we find that the posterior and anterior walls of the vagina are in contact with each other. Just inside the outlet we feel the vagina pulled sharply upwards and forward by the levator-ani muscles. When such a woman stands on her feet the vaginal walls remain in contact and air does not rush up into the vagina as it would into an open tube.

When there is a weakness in this pelvic diaphram muscle, conditions are changed. There is always a certain amount of pressure exerted upon the abdominal viscera and transmitted by them to the pelvic organs. With the integrity of the pelvic diaphram

impaired this pressure can not be resisted and we have a sagging and a falling down of the pelvic organs primarily, and of the entire abdominal viscera more or less generally as a secondary consequence.

Laceration of the perineum is by far the most frequent cause of such conditions. When the perineal body is lacerated, or when these muscular bands lose their strength, the vagina tends to become an open tube when the woman is in the erect posture. The vaginal outlet is not pulled up as it is in the normal perineum. Therefore the outlet of the tube is not closed. Air can rush up into the vagina as the woman stands in the erect posture and we have what is practically a hernia; namely, a breach in the strong muscular or bony boundaries of the abdominal cavity as a whole. The results are simply those of a hernia modified by the peculiarities of the anatomy in this location.

I would call attention to the title of my paper in that I discuss relaxation of the pelvic outlet rather than lacerated perineum. Many, possibly the majority, of the cases in which the integrity of the pelvic diaphram is impaired by a weakness of the perineal body are caused by actual lacerations of the perineum at childbirth. There still remains, however, a goodly number of cases in which this condition does not depend upon actual laceration and which in no way can be ascribed to negligence on the part of the obstetrician.

Frequently after labors in which there has been no external tear we find that on account of weak muscles, undue stretching of the pelvic outlet, or subcutaneous tears of the levator-ani muscle, there is a consequent

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

impairment in the pelvic muscular diaphram. Also this condition is at times seen in women who have never had children. In these cases a congenital weakness of the pelvic muscles is the most probable cause.

The results of this condition are, as I said, practically the results of hernia. The pelvic organs, on account of the force of gravity and on account of the intra-abdominal pressure transmitted to them from the abdominal organs above, tend to be forced downwards and outwards. Hence we have the different varieties and degrees of displacements and prolapse which are so familiar to all of us.

The diagnosis of the relaxed vaginal outlet ought to be easy and in the majority of cases it probably is. There is, however, this difficulty in at once recognizing the condition. Many of these women have such a great variety of complaints pointing to so many different organs that in taking the history one sometimes overlooks the relation of their symptoms to pelvic conditions and the pelvic examination may not be made. I will call attention to one complaint which is practically always present when the woman is having symptoms from this condition. All of them will say, either voluntarily or in reply to the direct question, that they have more or less constantly a feeling that the womb is "falling down out of them." This sensation is especially marked when they attempt to lift anything or when they become especially tired by walking or any other marked physical exertion.

In examination we should always be especially careful to investigate the condition of the pelvic diaphram. We not infrequently see patients in whom a marked relaxation of the muscular structures of the outlet is entirely missed because there has been no especial external laceration and on examination in the dorsal position the parts at first sight seem in fairly normal condition.

The levator-ani muscles are palpated on each side just inside the outlet by introducing the first and second fingers simultaneously. Then by separating the fingers and bearing downward and outward with the soft ball of each finger resting against the levator muscle on its respective side the exact amount of the relaxation is readily seen. The direction in which the lower part of the vagina runs should also be observed. With an intact muscle the outlet is pulled up and the lower part of the vagina runs at an angle to its course in the upper part. When the outlet sags down there is nothing to prevent air from entering the vagina when the woman is in the erect posture and allowing the anterior and posterior walls of the vagina to separate.

Probably the most important feature in examination is the examination with the woman in the erect posture. When the woman stands upright with the feet separated and the knees bent a little we are able to ascertain exactly the condition of the pelvic organs as it exists for her during the greater part of her waking hours. The woman should also be instructed to bear down while in this position. This examination in the erect posture will frequently make us realize a weakness in the pelvic floor which passes unnoticed at the examination in the ordinary dorsal position.

The treatment of relaxed vaginal outlet divides itself into two classes, the operative and the nonoperative. We will discuss the operative treatment first,

I do not intend to discuss or advocate any one of the different procedures or methods which have been brought forward in the past. The actual value which any one operation has depends upon two principals.

First, the approximation of the torn or separated levator-ani muscles in the median line between the rectum and the upper part of the vaginal outlet; second, the lifting up of the vaginal outlet in such a way that the entrance of air into the vagina is prevented.

The first of these results is obtained by uniting together laterally the levator-ani muscles. The second is obtained partly by means of the muscular wall thus formed and partly by the disposition of the soft tissues lying outside of this muscular wall. Any other considerations in perineorraphy are solely for cosmetic effect.

Practically I do not believe there is any one set method of incision or any one set figure of denudation which will apply to all cases. Many times we find a simple flapsplitting operation with repair of the muscles and removal of little or none of the mucous membrane the best procedure. Probably the old Emmett butterfly denudation is of greater service than any other one method. While we also often see cases of extreme relaxation in which removal of a large wedge shaped area of mucous membrane gives the best cosmetic result.

In uniting the muscles I would emphasize as important details that hemorrhage should be absolutely controlled and no dead spaces left.

The palliative treatment of these conditions is a subject which was far better understood by the gynecologists of the past than it is by us today. The training of the present gynecologist is, unfortunately I think, too often directed entirely along surgical lines. Gynecology is a surgical specialty solely because we are able to radically cure so many gynecological conditions by surgical methods. But gynecology was in existence for centuries before modern surgery was thought of. In treating gynecological conditions we should therefore use whatever procedure will in the case under consideration give the best results be they surgical or otherwise.

I have been greatly interested for a number of years in the treatment of these conditions by nonoperative procedures. I am free to confess that what I have learned on this subject I have not learned from recent textbooks or articles on gynecology.

The average surgically inclined gynecologist of today has many objections to palliative treatment in these conditions. I will also agree that in the majority of cases, all conditions being favorable, operation is the

best procedure. There are, however, not a small proportion of cases in which palliative treatment is justified.

The sort of cases which I consider best treated by palliative measures are as follows:

First: Patients in whom the condition is not marked and in whom we may expect to obtain a radical cure by palliative measures.

Second: Patients who on account of some physical impairment are not first-class operative risks. This includes a large number of old or elderly women, also patients with organic disease of some sort.

Third: Those women who find the necessary loss of time and attendant expense connected with an operation impossible for them to meet.

The palliative treatment which has been found most beneficial in such cases consists in these steps:

First: Any local irritation or inflammation must be cured.

Second: All abnormal positions of the pelvic organs, prolapse or backward displacement must be reduced.

Third: There must be introduced some sort of suitable pessary which will support the organs and hold them in place. The first step is important. Frequently there is an inflamed and sometimes ulcerated condition of the vaginal mucous membrane. Ulcerations of the cervix are also often present in cases of complete prolapse. A pessary introduced in such conditions acts as a foreign body and increases the inflammation. Any acute or subacute inflammatory conditions of tubes and ovaries is an absolute contraindication to pessary treatment.

The second requirement, reduction of the abnormal position, goes without saying. I would call attention to the fact, however, that oftentimes a simple non-adherent backward displacement may be reduced by the pessary itself. Introduce a large Hodge pessary; instruct the woman to take breathing exercise in the knee-chest position several times daily, and frequently the uterus will right itself in a few days.

The third step, introduction of a suitable pessary, is often more difficult than it sounds. For most cases the round ring or Hodge Smith pessary seems the best. Other varieties and forms are occasionally necessary.

The requirement of a pessary is that it shall so support the organs that the symptoms are relieved. It must, however, not be so large that it will give pain or cause ulceration from pressure. The patient is not conscious of the pressure of a properly fitting pessary.

On the selection and fitting of the pessary much depends. The length and breadth of the vaginal canal are measured and a pessary of the appropriate size selected. The patient should be examined again within a few days. After that there should be an occasional examination of the pessary to see if it is not causing any trouble.

There are dangers in pessary treatment. If allowed to remain indefinitely without care, they will cause trouble. Inflammation and actual ulceration result.

A patient wearing a pessary should take a douche, preferably daily, and at least three times a week. She should report for examination once a month. At this examination the pessary should be removed, cleansed, and if on examination there is no evidence of inflammation of the vaginal mucosa, it may be replaced.

Not every case which we may wish to treat by pessary is adapted to this method. Oftentimes it is only by the trial of many and various pessaries that we are able to put the one best suited to the individual case.

CONSERVATION OF TISSUE AND FUNCTION IN AMPUTATIONS.*

W. R. McKinley, M. D., F. A. C. S., Columbus, Miss.

Conservation of tissue is the rule rather than exception in nearly all modern surgical clinics both in this country and abroad. Truly, operators have demonstrated that surgery is a branch of medical science that is evolutionary. Time was when many organs and parts of organs were uselessly sacrificed. Not alone was the subject's anatomy recklessly manipulated and mutilated but his physiology or functions were impaired or destroyed. One has only to read the transactions, or attend the meetings, of surgeons today to appreciate the progress that has been made in surgery. Today conservation is preached and in a great measure practiced in nearly branches of surgery. The genito urinary man as well as the gynecologist and general surgeon finds a broad field in which to use his ability and his talents in conserving tissue and function.

Feet, hands, legs and arms, as well as ovaries, tubes and uteri, are not now sacrificed as formerly was the practice. Really the conserving of a hand or foot, leg or arm is a much smarter or greater feat than mutilation. In perfect symmetry and artistic beauty amputation flaps were charted off upon the arms and legs always at the points of election and frequently higher up than the points of necessity. In conservative surgery symmetrical wounds and stumps of beauty will infrequently obtain, since the operator conserves all available viable tissue. The surgeon should not select the amputation site empirically but at the lowest point at which the nerve and blood supply is adequate.

To determine the viability of tissues, however, in conservative work is the all-important consideration. It is by no means an easy or simple task to always determine how much tissue can be conserved in a given case. This undertaking often taxes the surgeon to the limit. Herein comes one's knowledge of the theory of surgery, that is, a practical knowledge of anatomy and physiology. Sound judgment and keen observation with a fair amount of experience are of paramount importance in doing conservative surgery. The study of the

^{*}Read by invitation before the Escambia County Medical Society at Pensacola, June, 1915.

nerve and blood supply is essential. Tissues -skin, muscle or bone, receiving sufficient nerve and blood supply may nearly always be saved. Doubtless many arms and legs could be conserved if surgeons properly estimated the nerve and blood supply, especially so in the light of antiseptic and aseptic surgery. Add to an adequate nerve and blood supply, asepsis, good drainage and physiological rest that which seems an almost hopeless hand or foot may be conserved. This fact is found to be strikingly exemplified in accident and railway surgery, in which field perhaps conservative surgery finds its greatest usefulness. The conclusion might further be drawn to read that conservative surgery is valuable economically both to patient and corporation, in other words to both plaintiff and defendant. A practical point in observation is that the period of convalescence is longer in conservative than in radical surgery.

What makes conservative surgery possible? What is essential for the life and growth of a finger or toe, a hand or a foot? An organ or a member must have nourishment and must dispose of waste products. By referring to anatomy we find that nature wisely provides for a new arrangement of circulation when the main vessels are severed or ligated. Arteries in nearly every tissue of the body communicate with each other forming anastomoses. These anastomoses or inosculations are largest and most numerous in the limbs and especially is this true around the joints, which fact makes possible such work as excisions and resections. The smaller vessels inosculate more frequently than the larger ones and for this reason a hand or foot is easier saved than an arm or

Fortunately there are very few terminal arteries or those that form no anastomoses. A brief reference to some of the arteries which play an important role in establishing collateral circulation is not amiss in a report of this kind.

At the shoulder or surgical neck of the humerus we find the posterior circumflex anastomosing with the anterior circumflex, the acromial thoracic and with the superior profunda branch of the brachial.

At the upper third of the arm we find that the added circulation is carried on by branches from the circumflex and subscapular anastomosing with ascending branches of the superior profunda. At the middle and lower thirds of the arm the added circulation is made by the branches of the profundæ communicating with the recurrent radial, ulnar and interosseous vessels. At the elbow the arteries that communicate are the anastomotica magna, the anterior ulnar recurrent the anterior terminal branch of the inferior profunda, the posterior ulnar recurrent, the anterior terminal branch of of the inferior profunda, the radical recurrent and the interosseous recurrent. It is of practical interest to know that at the elbow joint the anastomotica magna is engaged in every anastomosis except that of the radial recurrent and the anterior terminal branch of the superior profunda. At the wrist and in the hand there are myriads of inosculations between the branches of the radial, ulnar, interosseous muscular, radial and ulnar carpals, profunda and superficial and deep palmar arches. In the fingers the digital arteries make inosculations too frequent to name.

At the hip and along the thigh the added circulation is made by the communication of the gluteal and sciatic branches of the internal iliac with the internal and external circumflex and superior perforating branches of the profunda femoris; the obturator branch of the internal iliac with the internal circumflex of the profunda; the internal pudic of the internal iliac with the superficial and deep external pudic of the common femoral; the deep circumflex iliac of the external iliac with the external circumflex of the profunda and the superficial circumflex iliac of the femoral; the sciatic

and comes nervi ischiadici of the internal iliac with the perforating branches of the profunda. At the knee and around the patella the added circulation is made possible by the internal and external articular branches of the popliteal, the anastomotica magna, the terminal branch of the profunda, the descending branch of the external circumflex, and the anterior recurrent branch of the anterior tibial.

At the ankle and along the leg the added circulation is made up by communications between branches of the anterior and posterior tibials, the peroneal and dorsalis pedis. In the foot there are numerous inosculations between the malleolar, planter and digital branches.

For the sake of brevity this paper does not deal with the broad field of conservative surgery done in the pelvis and abdomen.

Wherever benign, viable organs or tissues can be conserved it is the duty of the surgeon to do as little ablation or dissection as possible. In malignancy, however, thorough and extensive dissection constitutes conservatism.

How may we determine in a given case whether or not the whole limb or the hand or foot may be saved? We must judge the efficiency of the circulation by a keen sense of observation and practical study. In cases of gangrene it is a simple feat to follow from below upwards the atheromatous arteries and determine the site for amputation.

Accident and railway injuries offer perhaps the broadest field for conservative surgery. Many of these injuries are produced by cotton gins, corn crushers, steam laundries, brake bars and drawheads.

CASE REPORTS.

Case 1. Louise H.: Railway accident case which four surgeons urged to submit to amputation. She was a woman in middle life, who had not only a compound, comminuted fracture of both bones of the forearm in which two inches of ulna and three inches of radius were—macroscopically

speaking-entirely absent, the hand dangling by her side, supported apparently by the skin, muscles and blood vessels on the dorsal or external side only. It did not seem possible there was sufficient blood supply left to nouirsh the hand or any part of the tissues below the elbow. In lieu of amputation, the arm was fixed and placed as far as possible at physiological rest. The dorsal side, which was covered partly by integument, was placed on a board and fixed at the hand and above the elbow with plaster-of-paris, the palmar side being left open for drainage and dressings. To the surprise of all who saw her, she got off with her life and with a hand that is of much help to her. This illustrates that many ugly cases may be saved from mutilation.

Case 2. Major C.: An aged soldier who had senile gangrene of the foot. Consultants advised amputation above the knee. Instead incision was made at line of demarcation, arteries followed up and amputated at point of occlusion which was below knee. No recurrence.

Case 3. N. B.: Hand mangled in corn crusher. Several carpal, metacarpal and phlanges crushed. Soft tissues considerably lacerated and contused. Hand and arm put to rest and well drained. Immunizing dose of antitetanic serum administered. Patient now has a useful hand.

Case 4. C. C.: Railway accident. Right foot crushed by car wheel. Injury was so extensive that it took courage to undertake conservative measures. Foot and ankle put at rest and good drainage provided for. Scarlet R. salve helped immeasurably in supplying a skin covering. Result a useful foot.

Case 5. W. M.: Incised wound of dorsum of hand. Hand flexed. Tendons found and sutured. Result functions good.

Case 6. R. R.: Accidental severance of flexor tendons of finger. Tendons sutured with return of function.

CONCLUSIONS.

Many limbs or parts of limbs may be saved by conservative practice.

Conservative surgery has economic value. Use iodine freely but no water in recent wounds.

Amply provide for good drainage.

Place all wounds at physiological rest by means of splints or plaster of paris.

Not only bone but blood vessels, nerves and tendons may be conserved.

McKinley Sanatorium.

SUPRA-PUBIC PROSTATECTOMY.* J. C. Vinson, M. D.,

J. C. VINSON, M. D., Tampa, Fla.

A description of the supra-pubic operation necessitates a preconceived idea of the pathology of the condition for which the operation is indicated. Runge and Chiari in their research work proved the process of hypertrophied prostate to be one of adenomatous overgrowth. The prostatic overgrowth is essentially a disease of age, is present in about 33–1-3 per cent of old men, and is symptomatic in the true sense of the word in about 15 per cent. The condition is one of progression, and is farreaching in its general systemic effects. The overgrowth alters the character of the bladder outlet.

The prostatic urethra is elevated, contracted, and irregular in outline. The secondary effects of this overgrowth is early seen in the bladder ureters and kidneys. All the symptoms presented by this overgrowth are essentially those of urinary obstruction, and for a more comprehensive view are conveniently divided into first, second, and third stages.

The first stage is ushered in by the progressive onset of nocturnal micturition, as the adenomatous mass increases the patient may void from three to ten or more times at night. In this stage there is slowness in

starting the stream, the volume of which is diminished, and associated with slight loss of control. During this stage there is only a slight amount of residual urine. The damage done to the bladder, ureters, and kidneys are of a negligible character.

The second stage is, of course, a merging of the first into the second, and there is no well-defined limitations between the two stages. For convenience sake we define the second as being one in which the compensatory action of the bladder is beginning to be lost, where frequent micturition at night disturbs sleep, and the dribbling of urine coupled with pain during the day makes life miserable. This stage is characterized by a moderate amount of vesical irritability, with an increased amount of residual urine, and the beginning effect upon the bladder, ureters, and kidneys.

The third stage is characterized by the almost complete failure of the bladder, in which periodically complete retention occurs, and the use of the catheter is a necessity. The amount of residual urine at this time being enormous, coupled ofttimes with a considerable amount of vesical irritability. This is the stage when we record the beginning of the end. At this time the functions of the kidneys are lowered, the ureters are dilated, the bladder is considerably trabeculated. Often times this is the stage of infection.

Routine methods used in making a diagnosis of prostatic hypertrophy should be intelligently and carefully followed. The urine when possible should be thoroughly examined at first, before instrumentation or trauma has been invoked. Rectal palpation defines the presence of the overgrowth, its consistency, its shape, and size. The catheter should be used to determine the possible length of the prostatic urethra, and also the amount of residual urine present within the bladder. Next, it is necessary to use the cystoscope and, if carefully handled with an exact knowledge of the distorted anatomy, its use should not occasion very much discomfort to the patient, or difficulty to the

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

operator. By the use of the cystoscope we can determine the character, location, and size of the intra-vesical disturbance, as well as locate foreign bodies if present.

The symptoms of urinary obstruction due to prostatic overgrowth have been combated by every means, both mechanical and by the use of drugs, without any apparent success. There exists today no remedy nor do any of the ingenious exercises that have been used, result in any permanent beneficial effects. The only palliative measure that has even been worth trying has been either the periodical, or habitual use of the catheter. One can readily see why the catheter has given temporary relief, but its continued use produces dire results. Squeir states that 50 per cent of unoperated patients will die within five years from the onset of obstructive symptoms without catheter life, where catheter life is not necessary. The beginning of catheter life shortens this expectation of life almost fifty per cent.

The real excuse for all operative procedures is the conservation of health and life. Consequently, the time of choice for the operation should be governed by this general surgical axiom. One should operate when the chances for recovery and full functionating results will be best. I would advise as an operation of choice, that the operation be performed before the bladder compensation has been lost. We are seldom so fortunate as to be able to control the actions of our patients before damage of considerable magnitude has been done.

We realize that cases of prostatic overgrowth present in a large number of instances bad surgical risks. The reserve of their vital organs has been destroyed by age, and their recuperative powers crippled. Consequently, a most important part of the surgeon's duty is embodied in the pre-operative care. General systematic conditions should be carefully handled. Despondency should be guarded against, pleasant surroundings invoked, and the general health of the patient improved. Above all these,

it is absolutely necessary to increase the functionating power of the kidneys, and to re-establish as nearly as possible the integrity of the bladder mucosa. The means of meeting these two last demands can be accomplished by two modes of procedure.

First, the drainage and vesical lavage through a catheter periodically introduced, or retained permanently within the bladder. This method I have found very unsatisfactory. The use of a catheter either periodically or permanently is a source of much discomfort to the patient. It produces congestion of the prostatic urethra, thereby increasing the danger of post-operative hemorrhage. There is no satisfactory means by which a catheter can be retained within the male bladder, and the irritation concomitant with the regular use of the catheter combats the end for which it is used.

Second, drainage and treatment of the bladder through a supra-pubic opening. The opening of the bladder by supra-pubic puncture is simple. Its direct effect upon the kidneys, bladder and prostate is so marked that the damage attendant enucleation of the prostatic mass is considerably reduced. Unlike the catheter it decreases prostatic congestion, thereby overcoming in a measure one of the prime factors of the high mortality rate. It considerably lessens the danger of shock, and through its psychic effects enthuses the patient with a much-needed bouyancy. The textbooks recommend supra-pubic puncture in cases that are essentially bad surgical risks. I maintain that every case presenting symptoms of urinary obstruction, particularly when coupled with loss of bladder compensation, is a bad surgical risk, and that if we fail to reduce the danger of the operation we are derelict in our duty.

The patient is prepared in the usual manner. Morphine, one-eighth of a grain, is given one-half hour before the operation.

The supra-pubic cystotomy is done under local anesthesia (novacaine ½ per cent). The usual cystotomy is performed. A half

inch drain is sutured within the bladder, being careful not to let the tube rest on the floor of the bladder. The tissues around the tube are thoroughly covered with sterile vaseline, and brought together with silkworm gut. The patient is returned to bed, made comfortable, and position changed from time to time.

Treatment of the bladder is begun by using three times a day hot boric acid solution, and every other day nitrate of silver, one to four thousand is used as a bladder lavage. When the kidneys show a proper function power, the bladder gives evidence of improvement and the general condition of the patient warrants it, enucleation should be carried out. This requires from six to ten days.

Chloroform as an anesthetic is not to be considered. Ether by the drop method has proved satisfactory, but the production of kidney irritability by its use has disqualified it as an anesthetic of choice in some few cases. I am particularly partial to the nitrous oxid and oxygen anesthesia. use is not attended with any danger if used by an expert. The patient readily awakens shortly after the mask is removed, and I have been unable to detect any deleterious effects. One-half grain of morphine is given one-half hour before the operation, the operating field is prepared as before, and nitrous oxid and oxygen anesthesia is induced.

The cystotomy opening is enlarged. The bladder is brought up within the wound. The finger of an assistant within the rectum produces pressure upwards. The line of cleavage within the urethra is found and opened with a small ivory paper knife. The fingers are introduced and the adenomatous mass is rapidly enucleated. Be sure all the overgrowth has been removed, then over the fingers of your assistant gently massage the mucosa over the prostatic cavity.

Gently sponge out the bladder with normal salt sponges, and watch oozing surfaces. If hemorrhage persists suture the bladder after the method of Hugh Cabot. Insert one-half inch drainage tube into the bladder, being careful not to touch the bladder floor. Invaginate the vesical wall around the tube. Use a large quantity of sterile vaseline around the tube and over the cut surface before suturing with silk-worm gut. I have found that the use of sterile vaseline precludes any of the disheartening symptoms that occur as the result of the extravasation of urine. Apply dressing snugly.

Post operative care. The patient has a bladder tube connected with a drainage receptical fastened to the side of the bed. Continuous irrigation is not used. Three or four ounces of normal salt solution is injected through the bladder drain every two hours for the first 24 hours, every three hours for the second 24 hours, and if the tube is draining nicely and not obstructed by clots, the injections are continued every six hours until the tube is removed and a smaller one inserted, being careful to apply sterile vaseline as at first. The patient is encouraged to begin voluntary micturition. Within three or four days the patient should be able to pass a small quantity of urine, which is gradually increased in amount.

At the end of this time the drainage tube is removed entirely. Thick pads are then applied to the wound and changed as often as necessary. The abdominal wound has ceased to leak in 14 to 21 days. The patient is not allowed to sit up until the fourth or fifth day after the operation, and only at short intervals at first, gradually increasing the time until about the tenth day when the patient can sit up the entire day. Urinary antiseptics are a routine measure. The drinking of water is important.

The diet is of such a character as to conserve and maintain the physical strength. The bowels must not move until the third day after operation, and then by the use of some mild laxative. Three months after the patient has been sent home he returns for a complete urinary and cystoscopic examination.

The results have been uniformly good. The bladder completely regains its functionating power. The bladder capacity is restored, and there is never the danger of urinary fistula.

Conclusions.

First: Recognition of prostatic hypertrophy as a prostatic overgrowth.

Second: The necessity of pre-operative care.

Third: The value of supra-pubic puncture.

Fourth: Efficiency of supra-pubic enucleation.

LOCATING THE SURGICAL BORDER-LINE IN GASTROINTESTINAL CASES.

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Hospital, Wesley Memorial Hospital, and
Atlanta Hospital; Consulting Gastroenterologist to the Atlanta Antituberculosis Association, Moore Memorial Clinic, etc.,
Atlanta, Ga.

This does not purport to be a study on abdominal surgery. There are some gastro-intestinal conditions requiring surgery and that alone, and in the presence of which, temporizing with internal or palliative measures may lose for the patient his "day of grace."

Of necessity, many of these conditions can not be gauged by any inflexible rule, and consequently some of the decisions are colored by the personal equation or personal bias of the physician or surgeon.

Instances are numerous in which, after some competent and conscientious surgeon had advised immediate operation in order that life might be saved, the patient afterward recovered without operation, perhaps outliving the surgeon.

On the other hand, mournfully many are the procrastinating invalids who put off from time to time the inevitable operation until,

when the abdomen is opened, there can be absolutely nothing done.

Then there are the border-line cases, puzzling to both the internist and surgeon, and which, in spite of intelligent consideration, may remain puzzles for months or years.

The conclusions advanced in this paper may not meet with the approval of all its readers and I fully realize my inability to prove some of the deductions herein contained. I might affirm, however, that each statement is based on actual experience or observation, and not on hearsay.

Early Malignant Growths in the Stomach or Intestines.

Such patients, when this condition is diagnosed, should be urged to undergo operative interference without delay. Palliative measures of the internist are permissible only to prepare for operation or when, for some reason, surgery can not or may not be undertaken.

In some cases where previous malignancies have been in evidence, it is not wise to wait even for a positive diagnosis, but surgery should be recommended at the first suspicious symptom.

A careful roentgen examination, interpreted by an experienced observer, will often be of marked assistance in arriving at a decision.

Late Malignant Growths.

These, especially in persons of advanced years, are sometimes difficult to rightly decide. In positive diagnoses, where the cachexia is marked, where the digestion is with an effort furnishing adequate calories, where there are either patent metastases or a reasonable suspicion of their presence, the internist should be cautious in advising any radical operation with the hope, implied or expressed, of lengthened days. While at best the outlook is dark for these sufferers. surgery of any sort seldom brightens it.

In such gloomy conditions, I often lay before the patient in a tactful manner both sides of the question, advising him to also discuss the situation with a competent surgeon, and permit him or the responsible members of the family to make the decision.

Non-malignant Growths of the Stomach,

Pylorus or Duodenum.

In some of these cases surgery wins its brightest laurels. When the patient is comparatively young, when there is little or no cachexia, but where the symptoms point to plain obstruction from cicatricial growth, surgery should be sought without hesitation.

It is an accepted conclusion among well-posted observers that the presence of a marked seven-hour residue in the stomach after a fairly liberal meal, calls for surgery in nearly every instance.

Where the pyloric outlet is greatly stenosed, it is useless for the internist to continue medical treatment with the expectation of notable improvement, though some of the symptoms may be ameliorated for a season.

Again, there are occasionally sudden and acute kinks of the duodenum which, for a time, as effectually close the pyloric outlet as if a growth were there. Such a condition may be brought about by a sudden or marked gastroptosis.

In these predicaments a roentgen examination is of invaluable aid.

Confirmed Atony or Dilatation of the Stomach.

Sometimes these cases need surgery, but often a better result may be accomplished by other means. When complicated by adhesions and constrictions of the bowels, with marked visceroptosis, the outlook for comfort is quite problematical.

Massage, abdominal supports, hydrotherapy, electricity, etc., are in many of these conditions sufficient to afford such a state of comparative relief that surgery need not be recommended. Occasionally, however, this offers the only tangible alleviation.

Appendicitis, Acute or Relapsing.

There are probably no inflammatory states of any sort in the abdominal cavity which tax the discriminating judgment of the internist as do the various appendiceal manifestations. Were it always possible to immediately place the patient in a hospital, where he could be under the constant scrutiny of practised eyes; where frequent leucocyte counts could be made by competent microscopists, and where trained abdominal surgeons were ready at a moment's notice, the problem would be greatly simplified.

Unfortunately, the majority of acute appendicitis occur in those who, if necessary, must depend on the judgment of the general practitioner, and who find themselves in that dangerous channel between the Scylla of surgery and the Charybdis of delay.

Let me affirm that but few cases, unless they be of the fulminating type, require operative interference during the first attack. In this opinion many surgeons will not concur. Furthermore, if all of the facilities above mentioned are available, the attending physician can better afford to await developments than in a case in some isolated locality, where delay might force a hurried operation by inexperienced hands, or might necessitate a journey to a city, coupled with all the dangers incident to moving a patient in such a precarious condition.

Let me lay down a few general rules to be considered, no one of which can be taken too literally.

If it is possible to have frequent blood counts made, the result will be helpful, but not necessarily conclusive. If the differential count is not marked and does not increase, but rather diminishes, and the symptoms gradually defervesce, an operation during the acute attack is probably not indicated.

Dr. E. E. Smith has shown that the differential blood count is an indicator of the activity of the process and not invariably of gangrene; but if the absolute leucocytosis is low (below 15,000), with high polyneuclears, it is probably gangrene.

Dr. Charles Langdon Gibson holds that the greater the disproportion, the surer are the findings, and in extreme disproportions the method has proved itself practically infallible. As the relative disproportion between the leucocytosis and the percentage of polyneuclear cells is of so much more value than the findings based on the leucocyte count alone, this latter method should carry more weight when performed by a competent microscopist.

If the patient shows decided symptoms of acute peritonitis when first seen, or they come on suddenly, with marked general muscular rigidity, exquisitely tender abdomen, tympanites, with drawn and anxious features, an operation is urgently indicated.

If there be found on careful palpation an area of resistance in the right iliac fossa, and this increase along with the general symptoms for twelve hours, especially with slight chilly sensations, an operation is indicated.

If there is a disproportion of the pulse rate with the temperature—either a rising temperature with a slow pulse, or subnormal temperature with a rising pulse, an operation is probably indicated.

Should there be symptoms of abscess or should the case not improve in a few days, with suspicions of complications, an operation is probably indicated.

If even there is diminishing tenderness in the abdomen, with normal temperature and pulse, but the patient's facial expression is drawn and pinched, while an indefinite sense of ill-being is constantly present, the internist had best keep in touch with a surgeon, for appendicitis is a most treacherous disease, and some symptom of fatal import may appear at any time with kaleidscopic rapidity.

Should the first attack pass over in safety, no operation is called for unless the trouble shows a tendency to recur. If the second attack is milder than the first, delay may be allowed, but if the exacerbations are inclined to increase in severity, an interval operation is indicated.

These general suggestions can not take the place of sound and discriminating judgment, which must be exercised in every instance, whereby each case is decided on its own merits.

Gastric or Duodenal Ulcer.

Some of these cases come to surgery after internal treatment has proved unavailing. As to whether a chronic ulcer in the stomach or duodenum should be given up by the internist, depends greatly upon the intelligence and mental attitude of both the patient and physician.

Should the patient willingly submit to thorough and adequate therapy, allowing plenty of time for nature's recuperative work, and yielding with equanimity to the probably rigorous measures indicated, the chances for a cure are fairly bright; and, if proper dietetic and hygienic precautions are faithfully adhered to, the dangers of a relapse are proportionately lessened.

If, on the contrary, the patient is impetuous and irritable, with perhaps bad habits, and no special pertinacity in following out a set course; if he claims pressing business engagements that will infringe on the time essential for his treatment, trying to force the physician to make unreasonable promises, as has often occurred in my experience; and if the case gives a history of relapses after periods of comparative health, showing indications of impaired gastric motility, or pyloric patency, the internist should be most cautious in holding out assurances of permanent improvement, except through surgical means.

Many of these "ulcer cases" habitually go from one physician to another, seeking relief, but unwilling to furnish the time, patience and co-operation, which should balance the science, thought and forbearance required of the medical attendant; consequently nothing lasting is attained. Such as these are best referred to the surgeon at once.

Hemorrhages from the Stomach or Upper Alimentary Tract.

No hemorrhage from the body is more dramatic or exciting than from the stomach, but fortunately the first hematemesis is

seldom fatal, and only when there are frequent repetitions is surgery demanded.

Were it certain that the blood came from one or a few frankly bleeding spots, the situation would be different. Often, however, there are multiple erosions, or even a deeply congested gastric mucosa from which the blood oozes. Apart from clearing out the coagula, so as to permit of gastric contractions, and the use of direct astringent measures, surgery can do but little in these fulminant cases. Furthermore, what is done must be done quickly and expertly, and unless the patient can be placed in the hands of one skilled in abdominal surgery, I would hesitate to advise any patient to have his abdomen opened up for gastric hemorrhage.

This conclusion, which will probably not be accepted by some estimable surgeons, has been forced upon me by extended observation.

Chronic and Indefinite Ills Resisting Internal Treatment.

This may include a heterogeneous mass of invalids, who are really ill, and whose digestive discomforts arise from material causes.

Sometimes an exploratory laparotomy will disclose the chief lesion, and perhaps point the way to absolute cure. Again, the necessary quietude and rest to the abdomen and alimentary tract following an operation will often exert a far-reaching good effect, augmenting many-fold the actual benefit conferred by surgical procedure. I might state, also, that, even when nothing of consequence is done by the surgeon, the operation itself, with the opening of the abdominal cavity may put into action the most marvelous train of psychic sensations, and an apparently permanent improvement ensues.

Did space permit, I could report several remarkable instances of this sort, where, after an abdominal section alone, ills of many years cleared up as if by magic, and the patients, unaware of what had *not* been done, considered themselves monuments of surgical achievement.

So, after all known medical and internal means have been exhausted without avail, it may be well to advise that the abdomen be thoroughly explored, with the hope of Micawber that "something may turn up" that can be remedied.

We should remember, however, that there are surgeons and surgeons, and unless it is practicable for our patients to command the services of those adept in surgery of the abdomen, we should be slow to recommend radical measures with the implied hope of marked improvement or cure. Otherwise, we might suggest to our long-suffering dyspeptics that perhaps it would be preferable to "bear those ills they have than fly to others that they know not of."

022 Candler Building.

PROPAGANDA FOR REFORM.

Antox.—"Dr. W. J. Garbutt, Milwaukee, Wis., sells Antox. It is said to cure every contagious disease if taken at the onset. Garbutt issues two sets of advertising, one for physicians and one for the public. The A. M. A. Chemical Laboratory found that essentially each 100 c.c. contained approximately 0.92 gm. animonium chlorid, 0.12 gm. hydrogen chlorid (equivalent to 1.2 c.c. of diluted hydrochloric acid, U. S. P.), 0.35 gm. hydrogen sulphite (equivalent to 6 c.c. of sulphurous acid, U. S. P.), and 18.5 gm. of invert sugar. (Jour. A. M. A., July 3, 1915, p. 45.)

GRAY'S GLYCERINE TONIC.—The Council on Pharmacy and Chemistry reports that Gray's Glycerine Tonic Comp. (Purdue Frederick Company, N. Y.) is not eligible for admission to New and Nonofficial Remedies because its composition is secret; because grossly unwarranted therapeutic claims are made for it; because the name of this pharmaceutical mixture does not indicate its chief constituent, gentian, and because its use is unscientific and a detriment to rational medicine. From the statements made in regard to its composition it appears that besides the alcohol, gentian is the only

active drug present. Nevertheless the "tonic" is said to be good for no less than thirty-two diseases, ranging from amenor-rhea to whooping cough. (*Jour. A. M. A.,* July 10, 1915, p. 189.)

HOROWITZ-BEEBE CANCER TREATMENT.— Newspapers are giving much attention to a new "serum"—Autolysin—for the treatment of inoperable cancer. This had its origin in the publication by S. P. Beebe, formerly professor of experimental therapeutics at Cornell Medical School of a system of treatment by "Alexander Horowitz, Ph. D., an Austrian biologist and chemist," and its trial at the General Memorial Hospital. The composition of the preparation is not disclosed as to quantities, but it is said to be made from: Menyanthes trifoliata, Melilotus officinalis, Mentha crispa, Brassica alba, Anemone hepatica, Viola tricolor, anthemis, fructus colobynthidis, lignum quassiae, Urtica dioica, radix rhei and hedge hyssop. One critic of the matter has remarked that apparently the only ingredient which has been overlooked in the preparation of the new remedy was a rabbit's foot. (Jour. A. M. A., July 24, 1915, p. 336.)

LIQUID PETROLATUM.—Liquid petrolatum is sold under proprietary names such as Bakurol, Interol, Med-O-Lin, Muthol. Semprolin, Whiteruss, Nujol and Stanolax. Nujol is put up by the Standard Oil Company of New Jersev and Stanolax by the Standard Oil Company of Indiana. Probably before long each of the other Standard Oil companies will have its own name for liquid petrolatum—that is, if physicians will tolerate it. There is no excuse, whatever, for special brands of liquid petrolatum, so far as the medical profession and the public are concerned. But it is otherwise with those who supply the product. More can be charged for a product sold under a trade marked name and claims can be made which could not be made when the product is sold under its proper title, liquid petrolatum. (Jour. A. M. A., July 10, 1915, p. 175.)

TONGALINE AND PONCA COMPOUND,— The Council on Pharmacy and Chemistry reports that Tongaline, Tongaline Tablets, Tongaline and Lithia Tablets, Tongaline and Quinine Tablets and Ponca Compound Tablets, products of the Mellier Drug Company, St. Louis, are ineligible for New and Nonofficial Remedies because their composition is indefinite and semi-secret; begrossly exaggerated therapeutic claims are made for them; because their names are misleading, and because their composition is unscientific and irrational. Tongaline is essentially a sodium salicylate mixture. Its name is derived from one of the asserted constituents, "tonga," an inert, long discarded mixture of barks and herbs said to be gathered and prepared by Fiji Islanders. In addition, Tongaline is stated to contain blue cohosh, colchicum and pilocarpin. The amounts of the ingredients are not now declared. Neither is the composition of the Tongaline and Quinine and Tongaline and Lithia Tablets made known. Ponca Compound is a "female weakness" remedy in tablet form. The name suggests that "Ponca" is a medicinal substance and at one time "Ext. Ponca" was named as an ingredient. Now the tablets are said to contain extract of mitchella repens, senecin, helonian, caulophyllin and viburnin. Not only are no quantities given, but the character of senecin, helonin, caulophyllin and viburnin is not made known. (Jour. A. M. A., July 17, 1915, p. 269.)

M. I. S. T. No. 2.—M. I. S. T. (Murray's Infallible System Tonic) No. 2 is sold as a cure for cancer, locomotor ataxia, paralysis, diabetes, suppressed and profuse menstruation and a host of other conditions. Analysis in the A. M. A. Chemical Laboratory demonstrated that M. I. S. T. No. 2 consists of capsules which contain aloes and blue mass as their essential constituents. (*Jour. A. M. A.*, July 31, 1915, p. 446.)

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THE TREATMENT OF INFECTIOUS DISEASES WITH THE SPECIFIC SERUM OF CONVALESCENTS.

"Shortly after the discovery of diphtheria antitoxin numerous efforts were made to find antitoxins for various other infectious diseases, as it was believed that the principle illustrated by the treatment of diphtheria with antitoxic serum was one of general application. It soon was learned, however," says The Journal of the American Medical Association, "that only in diphtheria and tetanus is recovery dependent on the direct neutralization of definite toxins by specific antitoxins. In the course of this search for specific methods of treatment it was proposed to use the serum of convalescents from attacks of certain familiar infectious diseases. Thus, Weissbecker tried the subcutaneous injection of 10 c.c. of the serum of convalescents in measles, scarlet fever, typhoid fever and pneumonia, reporting good effects especially in the latter disease. He reasoned that recovery from these diseases is the result of a natural immunization, and that consequently the blood of convalescents may be assumed to contain specific antitoxins or, more broadly, specific antibodies.

"Huber and Blumenthal were impressed favorably with the effects of specific convalescent serum in scarlet fever, measles and pneumonia, and von Leyden described sixteen cases of scarlet fever treated in this way, three of which crisis occurred immediately after the injection of the serum, the quantity of which varied from 10 to 20 c.c. In one case the development of the rash was arrested. Von Levden makes no mention of the exact time after the attack when he obtained the serum. This report was followed during the next year by a few further reports mostly with 'good results'; but now the method fell into abeyance until 1912, when Reiss and Jungmann described their results in cases of scarlatina gravissima.

"Reiss and Jungmann used serum ob-

tained about the end of the third week after the onset, injecting from 50 to 100 c.c. intravenously. Twelve cases are described, all injected not later than the fourth day, and in all there followed a rapid improvement as by crisis within fourteen hours or so, which was in marked contrast to the course in cases not so treated, in which recovery by crisis occurred only occasionally. The serum did not seem to have any effect on secondary infection. In some cases the rash faded away immediately after injection of the serum. Koch reports on twenty-eight additional cases, treated with convalescent serum in the same hospital. Only one death occurred, and in that case the patient was moribund when admitted. Kloch emphasizes that in this series of extremely severe toxic scarlatina, hemorrhagic nephritis did not develop, that the improvement in many cases was as striking as that seen in diphtheria after injection of antitoxic serum, and that the serum must be injected intravenously in quantities not less than from 50 to 100 c.c. even in small children, and not later than the third day. Koch also reports good effects in twelve cases injected intravenously with normal human serum, and Rowe was unable to convince himself that there were any different effects in cases treated with normal and with convalescent serum. Koch, however, states that the superiority of convalescent serum is seen clearly in the very severely toxic cases with coma and cool and bluish skin. In order to secure the best effects, the mixed serum from several convalescents is used after it has been stored for some time. The serum should be obtained about twenty-one days or thereabouts after the onset. The most rigid tests must be used to determine freedom from tuberculosis and syphilis on the part of the donors, and the sterility of the serum established by cultural methods. In hospitals for scarlet fever there need be no difficulty in having on hand suitable serum

from convalescents. Koch suggests that such serum be reserved for the gravest cases, and that otherwise normal serum be used. As yet no explanation is offered of the alleged benefits of normal serum. Schultz believes he has shown that the effect does not depend on liquids that are extracted in the cold.

"Netter recently has used the serum of persons who had had poliomyelitis in the treatment of the acute attack, giving the serum intraspinally in small doses repeated daily. He says the results were good.

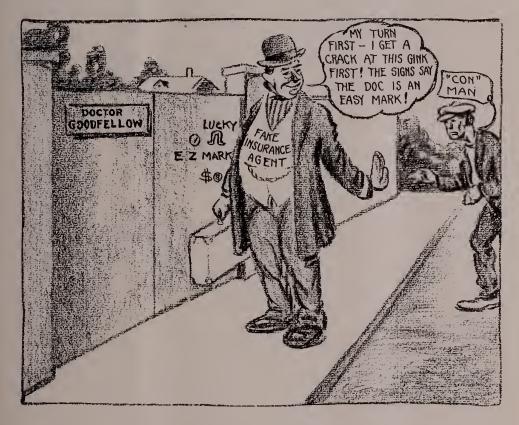
"If we ask what we can expect from this method of specific treatment, the answer must be that only by continued critical observations can its value be determined. Certainly the results described in the severe toxic forms of scarlet fever fully warrant extended trial under suitable conditions, and that would mean in hospitals where convalescent serum can be kept on hand in such mixtures as are most likely to insure some specific antiscarlatinal virtues. Where such serum is not obtainable, there certainly is no reason why sterile, non-toxic, normal human serum may not be tried in severe and desperate cases."

THE PHYSICIAN AN "EASY MARK."

"Regularly there drift into this office," says The Journal of the American Medical Association, "the sad complaints of physicians who have trusted their fellow men, not wisely but too well. At least every third or fourth issue carries the old familiar heading, 'A Warning,' and a detailed description of the latest species of the genus 'fraud.' The types of impostors are varied, at times, even amusing. A late specimen, leaping here and there over the country, offered to physicians for the small sum of three dollars a year's subscription to any of the best magazines and a set of the complete works of any of the most prolific authors. A moment of thought would have shown the willing victims that the material

offered could not possibly be sold for ten times the sum. Another engaging young man packed a sample case with the latest models of medical apparatus, offered to accept orders, at half the usual price, and allowed a special discount of 10 per cent for cash with the order. The latter saving appealed so greatly to the economical physician that the suave gentleman used up his order book before he left the town. Strange

lectures are delivered weekly at the rate of 25 cents per lecture, and the genial individual who introduces them claims that he is interested in research and the proceeds are to aid him in his monumental work. In due time the 'lectures' begin to arrive at the rate of six or seven at a time. One must see these pamphlets to learn their true value—or rather lack of value. If the doctor refuses to accept them, and hesitatingly sug-



to relate, neither the syringes, hypodermics and thermometers nor the money advanced were ever seen again.

"Perhaps the physician who reads this sad commentary on the perspicacity of his fellow practitioners has somewhere stored away some pamphlets on 'New America and the Far East.' This proposition was—and no doubt is—offered to physicians as 'A Series of Scientific Lectures on Ethnology and Anthropology, Recommended by the American Medical Association.' The

gests that he would like to back out, the promoters try to compromise by offering something else, for example, cheap medical books, or old editions of new books.

"A recent scheme is a so-called medical index association. The authors of this peculiar swindle engage offices, located in high-class medical office buildings, which are equipped with new furniture and a host of stenographers and solicitors. The offer is to send to subscribers, at the rate of five or ten dollars a year, a reprint of any

article appearing in any scientific journal published in the United States or England, together with a complete monthly index of medical literature—an impossible proposition. After securing a good haul of subscriptions, the gentlemen quietly depart, leaving stenographers and solicitors jobless and penniless and the subscribing physicians innocently waiting for the fruits of their investments—which never come.

"It is hardly necessary to mention the various stock-jobbing propositions which are offered to physicians as too willing victims. Putting aside the mention of worthless mining and agricultural stocks, there is the more vicious type which makes the

physician a partner to a scheme for manufacturing worthless proprietary medicines and patent health foods. No physician can ethically connect himself with such schemes; from the business standpoint they are never profitable investments. We repeat—Never.

"Is the doctor really an 'easy mark?' He is not. The doctor is no 'easier' than the preacher or—let us whisper it—even the lawyer. The professional man is not in business; he is not a 'trader'; he cannot judge when a bargain is truly a bargain. Here lies the whole trouble; he is not suspicious—not on his guard. His attitude is one of sympathy with, not suspicious of, his fellow man."

Cancer Department

"In the early treatment of cancer lies the hope of cure." .

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

THE STORY OF MRS. HARRISON.

1.

John Harrison's wife stood before her mirror dressing.

She was looking forward with the pleasure of an experienced hostess to the little dinner for the entertainment of three of her husband's business friends and their wives.

There would be talk about the travel and play of the summer just past and discussion of the plans and activities of the coming season.

The freshman class at Harvard and the girl's school in Virginia had promised the Harrisons complete domestic freedom for the first time since their marriage twenty years before.

Raising her arms to adjust a bandeau something in the outline of her bust caused Mrs. Harrison to utter a little exclamation as she passed her hand quickly over the place.

Surely she must be mistaken.

But no, she felt quite distinctly a small firm lump.

She could move it about easily but the overlying skin had a tendency to move with it instead of slipping about in the natural manner. There was no discoloration nor was there the slightest pain.

Lillian Harrison was a woman of poise and intelligence, but her discovery shocked her. How long she had harbored the little growth she could not imagine but there it was and—her guests would soon arrive.

Whatever might happen tomorrow, she would play the game bravely tonight.

TT

Promptly at the beginning of the consultation hour Mrs. Harrison entered the rooms of her old friend and medical adviser, Paul Wharton.

On learning the cause of the visit an expression of gentle seriousness came over the face of the physician and there followed a few searching questions.

The absence of any form of malignant disease in the family of his patient was already known to him.

Her appearance of blooming health to-

gether with the intimate knowledge of his patient's history made it unnecessary to waste words.

After what seemed to her an absurdly superficial examination the physician announced his opinion.

"My dear girl," he said, "you have shown your customary good sense. Delay would have meant added anxiety and possibly danger. I am not sure as to the exact nature of this—let us call it irregularity, but I do know that we must not waste our time in guessing. My friend, Dr. Hal Miller, will undertake the proper treatment."

Poor Mrs. Harrison's alarm could not be hidden as she recognized the name of an eminent surgeon, and the sharp drawn breath and slight tightening of the lips were not lost upon Wharton.

"Miller," he continued, "is a man of wisdom, sympathy and skill. Strange as it may seem to you, there will be no pain, no sickness. Nitrous oxide, our old friend, "laughing gas," has done away with the discomforts of ether and the relief when you find that it is really "all safely over" will do much to make you forget the natural worry and fear through which you have passed."

III.

Eight years later. Snatch of conversation between Miss Mary Ashe and Mrs. George Tompkins at the wedding of Ruth Harrison:

Miss Ashe: "How happy and how young Lillian looks today. She might be taken for Ruth's sister."

Mrs. Tompkins: "Well, why shouldn't she? She has a husband and children who adore her, she hasn't a care in the world and I'm sure she's never been ill in her life."

TV

The little story you have just read is that of a woman who was cured of cancer of the breast—one of the most justly dreaded of diseases.

You think perhaps, that the case is an

exceptional one. So it is, because the patient was exceptional.

The pity of it all is that information and education about cancer are not universal.

That instead of knowledge there is superstition.

That precious time is wasted in the worse than useless quack treatments which promise cure "without the use of the knife."

So that when the sufferer does finally come to the surgeon she comes as a last resort, too often hoping or even expecting him to accomplish the impossible.

Only think! In our country about seven thousand women suffer and die in a single year from this deadly malady: seven thousand out of a total of at a least seventy-five thousand deaths from all forms of cancer.

And remember, too, that in every case there was a time when the disease was curable, though unfortunately it is not invariably discovered in this early stage.

Surely we should not overlook the timely warnings which Nature nearly always gives.

Any lump or unnatural hardness in any part of the breast or in the armpit, or any reddish or brownish discharge from the nipple with or without soreness should receive instant attention and should be brought to the notice of the family doctor.

And especially is the *painless* lump to be feared for the breast cancer in its earlier stages does not compel notice by painful sensations.

Of all the cases of cancer in this part of the body only about one-eighth are in women under 35 though the disease has been known to occur in children under ten.

When we speak of a lump or an unnatural hardness it means that cancer of the breast need not be accompanied by an actual increase in size, but may show itself as a hardening and shrinking of the breast with indrawing of the nipple. In such cases the pores of the skin over the location of the disease become very pronounced so that the appearance is much like that of pigskin.

In the beginning there is no redness or other change of color.

The discovery of any one or more of the signs or symptoms which have been here described should be followed by a timely visit to a physician in whom you have perfect confidence. He will determine the necessity for further counsel.

Do not handle or irritate the affected part, but do exactly as your doctor advises.

Be assured that no one more earnestly desires you to be cured than he.

Now, all this does not mean that people are to make themselves miserable and nervous by looking for trouble. And it does not mean that because some one in the family has suffered from cancer you are in more danger that other people; and, contrariwise, remember that Mrs. Harrison had no family history of malignancy—a term which means cancer in some form.

The unfounded fear of cancer will cause many of the symptoms of the disease. Like the bald-headed man, who caught cold from sitting under a window which he *thought* was open, a woman has been known to worry forty pounds away on account of a lump in her breast which removed by a simple operation proved not to be cancer—and the forty pounds came back with the relief which followed.

Cancer of the breast will be permanently cured if it is extirpated before it has spread beyond the place where it began.

It becomes constitutional if it is neglected.

Any woman may be attacked by cancer of the breast. A mother nursing her child is not immune.

Pain comes late, but it does not mean that the case is hopeless.

WHAT ADVICE DO YOU GIVE THE MRS. HARRISONS WHO CONSULT YOU? EIGHTY PER CENT OF THE LUMPS IN THE BREAST ARE MALIGNANT AT THE BEGINNING; HALF THE REMAINDER WILL BECOME SO. CAN YOU AFFORD TO ADVISE A WAITING POLICY?

OUR DELEGATE'S REPORT OF THE SAN FRANCISCO MEETING.

Since returning from the San Francisco meeting of the American Medical Association, I have been repeatedly requested to tell all about the Panama-Pacific Exposition, all about the Grand Canyon of Arizona, and now, perhaps, some of my professional friends throughout the state may expect me to tell all about the sixty-sixth annual session of the American Medical Association.

But as it is about as difficult to tell all about one as another, I trust that the readers of The Journal will be content with a few notes in a minor key from their delegate to that memorable and epoch-marking meeting, especially when I remind them that it takes more than two hundred closely printed pages to record the proceedings of the House of Delegates.

I say epoch-marking because of the fact that the American Medical Association representing the profession in the United States, by holding a whole day's public exercise commemorative of the part that physicians and medical science have played in the Canal Zone, and making possible the construction of the Panama Canal and the greatest exposition ever held, publicly and justly claims credit for one of the world's greatest engineering triumphs, and, be it said to the honor of the public, that the medical profession is cheerfully accorded the distinction modestly claimed.

The Board of Trustees had set aside this day, Wednesday, June 23d, as Health Conservation Day. Neither the House of Delegates nor any of the sections of the Scientific Assembly held a meeting that day. It had been widely advertised that the day's exercises were for the laity as well as for physicians and, as a consequence, the lecture halls were thronged all day. The lectures, given by experts, such as Vaughn of Michigan, Mayo of Minnesota, Pusey of Illinois, McCoy of Honolulu, Blue of Washington, D. C.; Kellogg of California, and Bass

of Louisiana, were not ordinary, popular public health talks but were intended to show and did show the "historical and scientific evolution of knowledge concerning preventable diseases. They set forth triumphantly to physicians and laity the debt of the world to scientific medicine for social, economic and humanitarian progress."

Another significant fact connected with the session was the election to the presidency of the Association of Surgeon-General Rupert Blue of the United States Public Health Service, which fact, aside from its eminent fitness "for sundry weighty reasons," may have its influence as a factor contributory to the establishment of a National Department of Public Health and the appointment of an additional cabinet member. When that time comes, "as come it will for a' that," if I be president of the United States I shall appoint Dr. Blue the first Secretary of Public Health.

The other candidate for the presidency of the A. M. A., was Dr. William W. Grant of Denver, Colorado. Unusually eloquent nominating and seconding speeches were made for each candidate, but Dr. Blue was the choice of the delegates by more than two to one.

There was quite a determined effort made to elect Dr. A. J. Ochsner of Chicago instead of re-electing Dr. M. L. Harris of Chicago, as a member of the Board of Trustees. Dr. Harris, however, was the winner.

A spirited contest was waged between New York and Detroit for next year's convention. But when Detroit promised every delegate to the 1916 session a "Ford" to hang on his watch chain, the popularity of the Ford among physicians was soon manifested by a majority vote for Detroit.

It may be a little surprising to some that the attendance at the House of Delegates should vary from thirty-six at the first meeting to one hundred and one on election day, but let us remember that most of the business, except a few items of new business, is attended to by Standing and Special Committees that are at work all the year. No one, except the initiated, has but the vaguest idea how much actual work and what an outlay of time and money those committees give to the business of the Association.

The membership or, rather, the Fellowship of the Association, is 42,366, a net increase since last year of 1337. Of the total Fellowship only 228 are Florida physicians. This is not as it should be, therefore, while I am not an agent for the Journal of the A. M. A., I sincerely wish that every physician in our state were a subscriber. Certainly every member of our State Medical Association, staunch friends of organized medicine, in justice to himself and his profession, ought to apply for Fellowship and subscribe for the Journal and thus keep in weekly touch with the work, the endeavors, the achievements and aspirations of the American Medical Association.

(Signed) JOHN MACDIARMID, M. D., Delegate.

DeLand, Fla.

Reviews from Current Literature

SHOCKLESS OPERATIONS

Baldwin, J. F.: Shockless Operations, Am. Jour. of Surgery, Vol. XXIX, 1915, p. 281.

Baldwin reports a series of 120 operative cases, which were especially studied for shock. He believes that the essential factors in the prevention of shock lie in rapidity and gentleness of work, with a minimum of

anesthesia, rather than in "anoci-association" and other nerve or mind soothing or blocking procedures.

He states that "A rude operator, who accomplishes his end largely by mere brute force, who is indifferent as to hemorrhage, and careless as to protection of his field of operation, will doubtless meet with much

shock; and if he later learns gentler methods, is more cautious as to hemostasis, and more careful in protecting the operative field, he will find the shock disappear, and if in the meantime he has been induced to use the so-called "anoci-association" he may be deluded into attributing all his improvement to the latter while ignoring the former essentials. Crile is a fine anatomist, an accomplished surgeon, and a skillful operator, and I suspect that in his modesty he has mistaken the results of his own skill for the results of his "anoci-association."

The writer's summary seems very pertinent.

"Conclusions.

- "(1) Crile's laboratory findings, showing exhausted brain cells, on which he bases his theory of shock, have not been confirmed by independent laboratory workers, and such confirmation is clearly very desirable.
- "(2) Operative shock, from a practical standpoint, is the result of hemorrhage, or of undue and usually necessary traumatism in the field of operation.
- "(3) Prolonged operations, by the long exposure of the field of operation and the prolonged anesthesia, materially increase the liability to shock, so that a moderate hemorrhage, which would not produce any ill-effects in a short operation, may result in a marked shock.
- "(4) Any surgeon who operates rapidly, who guards against unnecessary hemorrhage, and who avoids brutality in handling tissues, will have shockless operations."

R. C. T.

THE BONE GRAFT IN DEFORMITIES OF THE FOOT

Soule, R. E.: The Bone Graft Pin in Painful Flat Foot, Paralytic Valgus and Other Painful Deformities of the Foot. N. Y. Med. Jour., Vol. C11, 1915, p. 350.

The author reports a method for arthrodesing the astragalo-scaphoid joint in which, in addition to the removal of the articular cartilages, a bone pin, taken from the crest of the tibia, is driven through the

scaphoid up into the head and body of the astragalus. This pin graft adds greater strength to the ankylosis, and is particularly efficacious in holding the bones in position during the healing process.

R. C. T.

A SIMPLE EMERGENCY SPLINT

Miller, Jos. L.: A Simple Emergency Splint for Local Railway Surgeons. Sou. Med. Jour., Vol. VIII, 1915, p. 718.

Miller recommends, for emergency dressings by local railway surgeons who are either very inadequately paid, or who are paid with passes only, the use of Banana crate boards instead of expensive, cumbersome, metallic or wooden, manufactured splints. The boards cost nothing, are light yet rigid, and may be carried in flat bundles. They are padded and applied as any other flat splint material.

R. C. T.

GUNSHOT WOUNDS OF THE ABDOMEN

Guerry, Le Grand: Consecutive Series of Twenty-seven Penetrating and Perforating Gunshot Wounds of the Abdomen, with Three Deaths. Sou. Med. Jour., Vol. VIII, 1915, p. 695.

In the author's series of twenty-seven cases, all but six cases were operated within twelve hours after injury—the average length of time being between eight and nine hours.

Guerry advocates immediate operation, unless contraindicated by hemorrhage or shock, in which case operation is postponed until transfusion and other measures elevate the resistance and in part at least restore the strength of the patient. He searches carefully for perforations, repairs them, irrigates the entire abdominal cavity with hot normal salt solution, using a Blake two-way irrigator, and usually drains by glass tube (Keith's) into the pelvis and occasionally through the flanks. The patient is placed in the Fowler position and proctoclysis is instituted.

Danna, in discussing this paper, stated that in his service at the Charity Hospital in New Orleans, while formerly operation was done on every case, of late, operation was but rarely performed, and that the mortality rate was less in the nonoperative cases than in those subjected to surgical interference. Danna treats these cases by the Ochsner method, the same as given acute cases of appendicitis not suitable for immediate operation.

R. C. T.

SUGAR IN SUPPERATIONS

Fackenheim, Dr.: Treatment of Suppurating Wounds with Sugar. M. m. W., 1915, Vol. 62, p. 1001.

The author's observations were made at the Reservelazarett at Kassel, which cared for a large number of wounded from the allied forces. The wounded were received usually after having been en route two to three days. Most of them had received first aid. Extensive wounds and profuse suppurations were the rule. One half of the wounded were treated in the usual way with antiseptics; the other half were treated with sugar. The wounds were well powdered with granulated sugar and covered with sterile gauze. Every other day dressings were changed. The results were surprisingly good.

As a rule in from four to six days the wounds presented clean surfaces with healthy, vigorous granulations, and in a short time were completely healed. Not only in wounds of a superficial character was sugar used but also in deep wounds and suppurating canals. These were gently packed with gauze impregnated with sugar. Sterilized sugar solutions were used as irrigating fluid and for wet dressings. Not only were wounds of the soft parts treated with sugar, but also complicated fractures.

The action of sugar in wounds manifests itself (1) in a rapid cleansing of a wound, (2) in vigorously forming healthy, elastic granulations, (3) in a vigorous stimulation of epidermization.

No harmful effects have occurred in the use of sugar in about 800 cases. No case of erysipelas or other wound infection has occurred. No eczema has developed around

the wounds, and no idiosyncrasy has been observed.

One very noticeable effect in wound treatment with sugar is that no unpleasant odors develop about the wound and dressings.

In closing the author says that on the basis of his experience he much prefers the treatment of infected wounds with sugar to any other treatment.

T. T.

MENSTRUATION

Novak, Emil: A Study of the Relation between the Degree of Menstrual Reaction in the Endometrium and the Clinical Character of Menstruation. Surg., Gyne., and Obst., Vol. XXI, p. 336.

This study is based on a large number of cases from the Gynecological department of the Johns Hopkins Hospital. Out of 339 cases in which the endometrium was removed either by curettage or by hysterectomy Novak selected 159 cases in which the data was sufficient to use for the study.

He bases his study on the principles first demonstrated by Hitschman and Adler in 1908. They demonstrated that the uterine mucosa undergoes a cyclical microscopical change which corresponds to the clinical cycle of menstruation. Therefore the value of such a study as this of Novak's depends primarily on the element of time. Accurate results can only be obtained by comparing specimens removed on the same day of the menstrual cycle.

A marked relation is shown to exist between the clinical character of menstruation and the degree of endometrial hypertrophy called forth by the menstrual stimulus. In general, the more profuse the menstrual flow the more marked the local hypertrophic changes in the endometrium. The less abundant the flow the less striking the local changes in the endometrium. The latter, therefore, plays an essentially passive role in menstruation,

An important exception to the above generalization is found in those cases of anteflexion commonly spoken of as the congenital type. In this group hypertrophic changes are, if anything, more marked than those noted in connection with other pelvic conditions. This apparently indicates that the ovary, whose activity seems to govern the degree of lyperæmia and endometrial hypertrophy, is not functionally deficient in such cases, as has been so often stated. The scanty menstruation so often noted in this type may be due to a deficiency in a local factor whose activity permits of the passage of blood from the vessels towards the uterine cavity. Such a theory also explains the spasmodic dysmenorrhœa so often associated with congenital anteflexion; the engorged mucosa, acting as an irritant to the uterine musculature, gives rise to spasmodic and painful uterine contractions.

Sterility is also frequently associated with congenital anteflexion. It is possible that future work may show that this is also due to a physiological deficiency of the uterus rather than an anatomical defect.

Novak states that his studies, while along anatomical lines, tend to emphasize the fact that the pysiological factor is of much more importance in the consideration of menstrual disturbances than mere defects or alterations in the anatomic structure of the generative organs.

G. R. H.

THE PROTEIN NEED OF INFANTS

Hoobler, B. Raymond: The Protein Need of Infants. Am. Journal Diseases of Children, Sept., 1915, Vol. 10, p. 153.

In this paper the author seeks to show what constitutes the optimum quantity of protein necessary for a healthy, growing infant. Careful experimentation on a number of infants demonstrated that the average child is fed a larger quantity of protein than is necessary or desirable for its continued growth and well being. When an amount in excess of the child's need is given this excess increases metabolism through becoming oxidized and is not without detriment to the economy. The child can not be made to utilize more than a definite quantity of

protein, no matter how much is administered. When a child is artificially fed, protein up to a maximum of seven per cent of its caloric need will meet all requirements. As a working rule to determine the protein need of an infant the author recommends that the protein of three-fourths of an ounce of skimmed, whole or top milk be given for every pound weight of the infant. The protein need of a child of twelve pounds would be supplied by nine ounces of milk. In order to supply the additional caloric need of the child carbohydrates must be freely employed. For each ounce of whole milk one-third of an ounce of sugar is added.

These rules apply only to healthy children and do not reflect on high protein feeding when employed for therapeutic purposes and for a limited period of time.

The author's views on low protein feeding are of particular interest in view of the growing tendency of many physicians to administer food of a high protein content.

J. D. L.

IMMUNIZATION AGAINST MEASLES

Herrman, Charles: Immunization Against Measles. Archives of Pediatrics, July, 1915, Vol. XXXII, p. 503.

A method of rendering children immune to measles by inoculating them with fresh virus of measles when the children are under five months of age is described in detail.

Under two months of age all infants are immune to measles. A relative immunity exists between the ages of three and five months. It is during this period of relative immunity that a child should be inoculated with measles virus. Secretion gotten from the nasal mucosa of a child twenty-four hours before the measles eruption has appeared is employed.

The infant to be inoculated has this virus applied to the nasal mucosa on a cotton swab. The result is that the inoculated infant acquires a very mild form of measles,

owing to its inherent relative immunity, but is thereafter protected from the disease.

The author selects by preference children between the ages of four and five months. He has employed this method in a series of forty cases, with no ill effects and apparently the immunization of the inoculated infants has been secured.

J. D. L.

PROTECTIVE THERAPY FOR MUMPS

Hess, Alfred F.: A Protective Therapy for Mumps. Am. Journal Diseases of Children, August, 1915, Vol. X, p. 99.

The blood of an individual who has recovered from mumps possesses certain principles, which render that individual forever immune to this disease. this hypothesis the author has succeeded in immunizing susceptible children by employing intramuscular injections of blood secured from other children who had recently recovered from mumps. An epidemic of this disease recently occurred in the Hebrew Infant Asylum (New York) and the author reports a series of twenty cases rendered by this method immune to mumps. The question of the permanency of immunization is not discussed. None of the children included in the series had previously had mumps; practically all were exposed to the infection following the injections, and none developed the disease. From 6 c.c. to 8 c.c. of blood is abstracted with an ordinary syringe from a person who has but recently had mumps and injected intramuscularly into the individual to be immunized. No reaction or other untoward effect has been observed. The author suggests that this type of therapy might be resorted to in connection with epidemics of other infectious diseases. J. D. L.

THE TREATMENT OF PHTHISIS

Gradwohl, R. B. H.: A Complete Discussion of the Therapy of Syphilis. The Urological and Cutaneous Review, 1915, Vol. XIX, p. 421.

Gradwohl, in an article of ten pages, gives a very complete summary of the pres-

ent status of the treatment of syphilis, as carried out by the most competent men in this country engaged in this special line of study. This was done by sending a circular letter to the most notable and best informed authorities in the United States on the treatment of syphilis. A series of four questions was asked, these questions covered the subject of salvarsan, neosalvarsan and mercurv therapy. The author states that the answers received show that with the exception of minor differences of opinions as to the details of treatment, all the American syphilologists who answered the questions submitted were very near agreed upon the general system of treating syphilis, which embraces the use of three medicaments mercury, iodide of potash, salvarsan or neosalvarsan. Gradwohl further says that it can be concluded, too, that successful treatment with these agents presupposes intensity of purpose and unremitting vigilance on the part of the medical attendant. The policy of not taking anything for granted holds true particularly in the administration of adequate treatment to a syphilitic. The exact dosage for each and every case naturally can not be catalogued. The "art" of the physician must here step in and properly embellish what the "science" of research has initiated and left undone. It seems to be a settled fact that salvarsan is a valuable agent in the treatment of syphilis. Its usefulness can best be explained on the basis of its remarkable power of rapidly healing cutaneous and mucous lesions, and from preventing the patient from indiscriminately shedding his spirochetes upon objects in daily use by healthy people. The author further reviews the answers received on the effect of mercury and iodide of potash on syphilis. The article is one of interest to all the profession and represents the sum total of the present situation in regard to the use of the new and old remedies in the up-todate treatment of syphilis. J. L. K-S.

INVOLVEMENT OF THE FINGER NAILS IN PELLAGRA

Brownson, W. C.: An Unusual Condition of the Nails in Pellagra. Journal of the Southern Medical Association, 1915, Vol. VIII, p. 672.

Brownson calls attention to the involvement of finger nails in two cases of pellagra, which had been seen by him; in his article he gives a very interesting review of the literature on the subject. Two photographic cuts accompany the article.

J. L. K-S.

AUTOSERUM THERAPY UNSUCCESSFUL

Willock, J. S.: Autoserum Therapy in the Treatment of Psoriasis and other Skin Diseases. Journal of the American Medical Association, 1915, Vol. LXV, p. 14.

Willock claiming to be stimulated by the striking results in autoserum therapy reported by Gotheil, Fox and Hilario, gave this therapeutic measure a trial in the treatment of a series of skin cases in Johns Hopkins Hospital. Among the cases treated were: psoriasis, 10 cases; eczema, 3 cases; dermatitis herpetiformis, 3 cases; chronic urticaria, 1 case; lupus erythematosus, 1 case. These cases were given four or more injections. A number of other patients were given only one or two injections, but as they did not give the treatment a fair trial, they are not included in the report. The following conclusions are given by the author:

As a result of treating carefully and observing the effects closely in ten typical cases of psoriasis, we have come to the conclusion that autoserum therapy is of no significant value in the treatment of this Neither have we been able to confirm the claims, so enthusiastically made by other authors, relative to the increased efficiency of weak chrysophanic acid ointments when used after the patient had already received a series of autoserum injections. Other patients, treated by us with 1 to 2 per cent chrysophanic acid alone, did just as well as those receiving the combined autoserum and chrysophanic acid, and thereby saved the time necessary in giving the autoserum injections. In a very chronic case of eczema, which had been treated by us without the serum with poor results, the patient practically recovered when the serum injections were used. However, the improvement began only after the local treatment had been changed; bathing was especially efficacious in this case. Three patients dermatitis herpetiformis improved markedly after one or two injections, but all sooner or later relapsed while under treatment. As the disease is considered a nervous manifestation, the early improvement might possibly have been due to mental suggestions. In one case each of chronic urticaria and lupus erythematosus, obtained no results.

While the series of cases is small, nevertheless each case has been carefully watched over a considerable period. We, therefore, feel justified in stating that autoserum therapy can not have any very marked permanent effect in the dermatises here considered. In the three cases of dermatitis herpetiformis, however, a marked temporary effect was obtained. It is a point of considerable interest that the serum should separate very rapidly in the three cases of dermatitis herpetiformis and very slowly and poorly in the three cases of eczema.

J. L. K-S.

SYPHILIS IN THE AMERICAN NEGRO

Lynch, Kenneth, M. McInnes, B. Kater and McInnes, G. Fleming: Concerning Syphilis in the American Negro. Southern Medical Journal, 1915, Vol. VIII, p. 450.

In an article of several pages Lynch, Mc-Innes and McInnes make a report of their studies of a series of 102 negro applicants for dispensary treatment in Charleston, S. C. This study from the standpoint of syphilis: Wasserman tests were made in each case, and a general clinical history taken of all the cases, also the blood pressure was recorded in each case. The writers give as their reason for this investigation, the generally reported prevalence of syphilis in the negro and the relationship between this infection and the frequent high blood pressure

in the people of that race, also the apparent ravages of the disease in the negro, and the effects of the infection upon the birth rate and the survival of the offspring of syphilitic women, both intrauterine and postnatal. The following conclusions are given:

"1. That in the Southern United States syphilis in the negro is proven to be a serious problem, affecting probably from 50 to 60 per cent of the major class of this people, including day laborers, servants and tradespeople.

"2. That the negro women are apparently more subject to the disease than the negro man.

"3. That there is no apparent suggestive relationship between the positive Wasserman reaction and high blood pressure in the negro.

"4. That the ravages of syphilis in the individual were not severe in this study, that the diagnosis of the disease is difficult to make in many of this class of cases without the aid of a specific test, and in respect to the Wasserman reaction, barring a few doubtful reactions and three or four negative reactions in suspicious cases, in our opinion this test proved of good value, verifying suspicions of the infection.

"5. That it seems that while one or two miscarriages occur not more frequently in the syphilitic than in the non-syphilitic, the habit of miscarrying is much stronger in the former.

"6. That syphilitic women are not as productive as the non-syphilitic, and their children do not survive as well as those of the latter." J. L. K-S.

CATARACT OPERATION

Green, N. S., and Green, L. D.: The Smith Indian Cataract Operation, in the Light on Scientific Investigation. Opthalmology, 1915, Vol. XI,

The author gives an exhaustive epitome of the Smith Indian Cataract operation.

"The claims for this method are, that it eliminates the need for waiting for the cataract to become ripe, avoids cataract and post-operative iritis, gives better average vision, and is consequently a more strictly surgical procedure.

"The statement is frequently made that the operation is unsuitable for Europeans or Americans, whose eves and behavior differ from those of the Hindus.

"Some of the most unruly patients we have had or seen anywhere were the Indians, whose ignorance and natural fear of the white man make them extremely difficult to control. Being poorly nourished and living under extremely insanitary and unhygienic conditions, they are poor subjects to bear pain or resist infection."

This operation differs from the ordinary one in that the lens is removed within its capsule.

After reviewing the different steps of the operation at great length, the author continues:

"It would appear that so far as has been developed at present, the Smith intracapsular operation is the ideal surgical procedure for removal of cataract."

BACTERIAL THERAPY

Haughy, Wilfred: Bacterial Therapy in Diseases of the Ear. Annals of Otology, Rhinology, Laryngology, 1915, Vol. XXIV, p. 15.

"Autogenous vaccines should be carefully made, extreme care being taken in making the culture to have all secretions wiped out of the canal and the canal disinfected with alcohol. The pneumatic otoscope is used to draw out any secretions which can not be reached by a sterile platinum loop. In this way we are reasonably certain to secure the responsible active organism. Too great heating of the vaccine in killing the germs may very easily lead to inactive vaccine, and no result in treatment.

"In my cases I have used dry cleansing and other routine methods of treatment, together with attention to the nose, for at least a week without result before using the

vaccine. I have kept up the local treatment in conjunction with the vaccine.

"Acute suppurative of this media generally responds promptly to ordinary cleansing treatment. In these cases I have not used vaccines. I have first satisfied myself that the condition is subacute or chronic. Wright, Pearce, Dabney, and others, however, advise the use of autogenous vaccines in all cases where it is at all possible to get them, on the ground that the condition will clear more promptly and more completely, recurrence being more rare.

"I have reported six cases which I shall call subacute otitis media purulenta. Some were of comparatively short duration before vaccine treatment, but all had been thoroughly treated for from one to three weeks before use of vaccines. Other treatment was not suspended. One case was treated with stock vaccine, one with a vaccine autogenous for case 9 listed in this group, and four were with autogenous vaccines. All six cured.

"There are six cases of chronic otitis media purulenta reported. One was treated with stock vaccine, three with autogenous vaccines, and one at first with stock vaccine unsuccessfully, later successfully with autogenous vaccines. In the table this case appears twice, once as a failure under stock vaccine and once as a cure under autogenous. The sixth case was the double meatomastoid case; autogenous vaccines made only slight improvement so far as the ear was concerned, not at all clearing the discharge.

"There are also four cases classed as mastoiditis. One a simple acute micococcus mocosus infection, cleared under stock vaccines. The second, a recurrence in an old mastoid wound, cleared under autogenous vaccines. The third, acute mastoiditis, was cured with autogenous vaccines. The fourth, postscarlatinal and postoperative, improved but discharge still present in small amount.

"While my experience has not been very

extended, it has been confirmatory of the findings of others over a number of years, and indicates that, especially in slow healing cases, we should give our patients the benefit of this new branch of therapeutics."

W. S. M.

APPENDICITIS

Rosenow, E. C.: The Bacteriology of Appendicitis. Journal Infectious Diseases, Vol. XV, 1915, p. 254.

Stanton, E. M.: The Sequence of Pathological Changes in Acute Appendicitis. American Journal Medical Sciences, Vol. CXLIX, 1915, p. 524.

These two articles appearing simultaneously justify certain congruent conclusions, the more interesting on account of the difference in origin. Stanton's observations comprise a gross and microscopic study of 539 appendices removed in the first ten days of acute appendicitis. Rosenow's studies embrace bacteriologic and pathologic findings in a long series of cases of experimental appendicitis in rabbits.

Stanton maintains, contrary to common belief, that acute appendicitis does not have its inception in a catarrhal inflammation of the mucosa, but that it is from the outset a diffuse inflammatory process, involving all three coats of the organ. A diffuse leucocytic infiltration is demonstrable within five or six hours of the onset of the symptoms. The lumen is practically always occluded within twenty-four hours and distension to a point approximating the maximum distensibility of the organ occurs this early. Focal areas of necrosis involving all the coats, appear in the first day and a fibrinous or fibrino-purulent exudate is as a rule present on the peritoneal surface.

A continuation of the process with infection of the peritoneum are the characteristics of the second day. The areas of necrosis are more extensive and gross perforation, with or without gangrene, if it is going to occur at all, usually takes place before the end of the second day.

By the end of the third day the destructive process in the appendix itself, has usually reached its maximum. From this time on the morbid process lies, in the main, outside the appendix. The appearance of fibroblasts and lymphocytes followed by the appearance of newly-formed blood vessels and young connective tissue evidence the processes of repair in the appendix.

Rosenow by injecting cultures derived from tonsils and the tissues concerned in appendicitis, produced lesions in the rabbit's appendix that are practically identical with those described by Stanton. On account of anatomical differences occlusion and strangulation are not observed as in man.

The results of culture of the organisms derived from the experimental appendicitis show that the streptococcus is the predominating organism. Tonsillar strains produced appendicitis in nineteen out of twentynine, and appendix strains in twenty-two out of thirty injections. The careful technique and complete protocols show that infection of the appendix was not simply due to large doses and widespread infection, but that an elective affinity for the appendix exists in many strains. Appendicitis often followed injection of small doses into the marginal vein area of the ear.

The similarity of the appendiceal lesions in the rabbits and man, the bacteriologic studies of Rosenow, Aschoff, and others, seem to warrant the conclusion that appendicitis is in the majority of instances a hematogenous infection. The results of injection of tonsillar strains of streptococci, when an elective affinity has been developed, indicate that the tonsil is more than an accidental portal of entry. A relationship between throat infections and appendicitis has often been suggested.

Stanton adds additional weight to one conception that is becoming more general every day; perforation would in the absence of purgation never occur. "The taking of a purgative medicine is more than an impressive antecedent (of perforation and peritonitis), it is a definite cause." H. H.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

CAUSTIC APPLICATORS, SPECIAL (SILVER NITRATE, 50 PER CENT).—Wooden sticks, 12 inches long, tipped with a mixture of silver nitrate 50 per cent and potassium nitrate 50 per cent. Antiseptic Supply Co., New York. (Jour. A. M. A., July 3, 1915, p. 29.)

Enzymol. — An extract of the fresh animal stomach containing the gastric enzyme in active standardized form and having an acidity due to combined hydrochloric acid. Enzymol is stated to be useful as an application to old sores, ulcers and slow healing wounds. It is said to correct offensive odors, to exert a solvent action on pus, sloughing and necrotic tissue and to impart a healing stimulus. For the solution of necrotic bone and in some abscesses hydrochloric acid is added to the diluted extract. (Jour. A. M. A., July 24, 1915, p. 333.)

E-Lep-Tine.—E-Lep-Tine is an "epilepsy cure." According to the Indiana State Board of Health, it contained sodium and potassium bromides 16 per cent, alcohol and ammonium valerate. (Jour. A. M. A., June 12, 1915, p. 2006.)

Herbetta Curine.—A package of Herbetta Curine contained three envelopes, labeled 1, 2 and 3, respectively, and in addition a number of red tablets. The A. M. A. Chemical Laboratory found that No. 1 consisted of tablets which contained soluble iron phosphate; No. 2, of tablets which contained some "bitter tonic," and No. 3, of tablets responding to tests for aloes and aloin. The red tablets were composed essentially of strontium and potassium bromide. (Jour. A. M. A., June 12, 1915, p. 2006.)

IODEX.—Iodex (Menley and James, Ltd., New York) is said to contain 5 per cent of iodin; the advertising suggests that the effects of free iodin are to be obtained from the preparation, which vet is said not to stain the skin. It is also claimed that thirty minutes after inunction, iodin can be found in the urine. The chemists of the A. M. A. Chemical Laboratory on examination found that Iodex contained only about half the claimed amount of iodin, that the iodin did not behave as free iodin and that after inunction of Iodex, iodin could not be found in the urine. Because of these findings and because of the unwarranted therapeutic claims made for the preparation, the Council on Pharmacy and Chemistry held Iodex ineligible for New and Nonofficial Remedies. (Jour. A. M. A., June 19, 1915, p. 2085.)

VENODINE.—Venodine (The Intravenous Products Co., Denver) was stated to be "an Intravenous Iodine Compound," put up in ampules, each of which contains "28 grains of Sodium Iodide, 1-8 grain each of Beechwood Creosote and Guaiacol in a suitable vehicle, and excipients to enhance its compatibility with the circulating blood." The "Therapeutic Indications" were said to include "infectious diseases, such as syphilis, tuberculosis, bronchitis, bacteræmias associated with chronic and acute nephritis (Bright's disease), and other infections." The Council on Pharmacy and Chemistry found Venodine ineligible for New and Nonofficial Remedies because it was exploited under unwarranted and grossly exclaims; aggerated therapeutic neither the name nor the advertising matter indicated that it was a preparation of the well-known sodium iodide, and because the combination of two such similar substances as creosote and guaiacol is unscientific, adding mystery to the preparation without increasing its efficiency. (Jour. A. M. A., June 26, 1915, p. 2155.)

CALCREOSE.—Calcreose (Maltbie Chemical Co., Newark, N. J.) contains in loose combination approximately equal weights of

creosote and lime. The advertising claims having been revised, the Council on Pharmacy and Chemistry postponed definite action, pending submission of proof (1) that the large doses of Calcreose recommended furnish large amounts of creosote to the blood and (2) that patients taking these large doses do not suffer from digestive disturbances, loss of nutrition, albumin in the urine or phenol urine as claimed. At the same time it was emphasized that this action did not indicate a belief on the part of the Council that enormous doses of creosote are necessary or beneficial in tuberculosis. far, the Maltbie Chemical Co, has not submitted the required evidence. Council's postponement of a report has been made to appear as a quasi-approval, the Council voted to announce that Calcreose had been refused recognition because the therapeutic claims were exaggerated and unwarranted by the evidence. (Jour. A. M. A., June 26, 1915, p. 2155.)

Intravenous Radium Solution .-Standard Radium Solution for Intravenous Use (Radium Chemical Co., Pittsburgh), is sold in ampules, each containing radium bromide equivalent to 0.05 mgm. radium element and 0.0002 gm. or less of barium bromide dissolved in 2 c.c. sterile normal salt solution. While the Council on Pharmacv and Chemistry confirmed the claimed composition of this solution so far as concerns the radium content, it refused recognition to the preparation because there is no clear evidence that intravenous injection has any advantage over the other methods of administering radium. The Council holds that on the basis of our present knowledge radium should be used intravenously only by those in a position to study its effects carefully and in an institution equipped with the necessary facilities for such study. (Jour. A. M. A., June 26, 1915, p. 213.)

RHEUMALGINE.—Rheumalgine (Eli Lilly and Co., Indianapolis) is put up both in tablet form and as a liquid. Each tablet, or teaspoonful of the liquid is said to contain:

"Strontium salicylate from Natural Oil 5 gr., Hexamethylenamin 2 gr., Colchicine 1-200 gr." The Council on Pharmacy and Chemistry found Rheumalgine in conflict with its rules in that unwarranted therapeutic claims were made because the combination is conducive to uncritical prescribing and because the name, being non-descriptive of its composition, encourages thoughtless use. (Jour. A. M. A., June 26, 1915, p. 2156.)

Radium Chemical Co.:

Standard Radium Solution for Bathing. Standard Radium Solution for Drinking. Standard Radium Earth.

Standard Radium Compress.

STANDARD RADIUM EARTH.—A mixture consisting chiefly of silica and small quantities of carnotite, 450 gm., containing 0.45 micograms of radium in the form of radium sulphate. For "Actions and Uses" see the article on radium in New and Nonofficial Remedies. For use the earth is mixed with water and heated for a time. The Radium Chemical Co., Pittsburg, Pa. (Jour. A. M. A., April 17, 1915, p. 1325.)

STANDARD RADIUM COMPRESS.—A compress containing 225 gm. of a mixture consisting chiefly of silica and barium sulphate containing radium sulphate equivalent to 15 micrograms of radium. For "Actions and Uses" see the article in New and Nonofficial Remedies on radium. Being applied wet, it is claimed that the action is partly due to beta and gamma radiation of the radium salt and partly to the radium emanation, which is dissolved out by the water. The Radium Chemical Co., Pittsburg, Pa. (Jour. A. M. A., April 17, 1915, p. 1325.)

Ouabain Ampules (H. W. and Co.)—Each ampule contains 0.5 mg. crystallized ouabain. Hyson, Westcott and Co., Baltimore, Md. (*Jour. A. M. A.*, June 19, 1915, p. 2067.)

Fairchild Bros. and Foster:

Enzymol.

H. K. Mulford Co.:

Cholera Serobacterin. Meningo Serobacterin. Typho Serobacterin, Mixed.

CHOLERA SEROBACTERIN, MULFORD (SEN-SITIZED CHOLERA VACCINE).—Marketed in packages of three syringes. H. K. Mulford Co., Philadelphia.

MENINGO-SEROBACTERIN, MULFORD (SEN-SITIZED MENINGOCOCCUS VACCINE).—Marketed in packages of three syringes. H. K. Mulford Co., Philadelphia.

Typho-Serobacterin Mixed, Mulford (Sensitized Typhoid Vaccine). — Packages of three syringes containing graduated mixtures of killed sensitized bacillus typhosus, killed sensitized bacillus paratyphosus A, and killed sensitized bacillus paratyphosus B. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., March 13, 1915, p. 909.)

Antiseptic Supply Co.:

Special Caustic Applicators, 50 per cent. Eli Lilly and Co.:

Syrup Cephæline, Lilly.

CEPHAELINE.—An alkaloid obtained from ipecac. It is relatively more emetic and less nauseant than ipecac and causes more renal irritation and less cardiac depression. It may be used as an emetic and expectorant. It is insoluble in water, but forms water soluble salts.

Syrup Cephaeline, Lilly.—A non-proprietary preparation containing cephaeline hydrochloride, equivalent to 2-5 grain cephaeline per fluid ounce. Eli Lilly and Co., Indianapolis, Ind. (Jour. A. M. A., June 19, 1915, p. 2067.)

Canthardin, Merck.—A non-proprietary preparation of cantharidin. Merck and Co., New York. (*Jour. A. M. A.*, Feb. 20, 1915, p. 665.)

Typhoid Vaccine. — Extensive clinical trial indicates that typhoid vaccine may influence the course of the disease favorably. The results indicate that, if used with discretion, typhoid vaccines do no harm. (*Jour. A. M. A.*, June 26, 1915, p. 2139.)

Publisher's Notes

FRANK S. BETZ COMPANY EXPAND.

Considerable interest has been aroused in professional and trade circles by the rumor of changes in the personnel of the Frank S. Betz Company of Hammond, Indiana. These rumors have been definitely confirmed by members of the company. Mr. Frank S. Betz, who hitherto has been virtually the sole head of this large business, has felt the need of active assistance in the management of the affairs of the concern, and especially to carry out plans of extension along the many lines in which the company is interested. As a result, a coterie of business men, including many high in the financial and business world, have purchased a large interest in the company; and extensive plans are being formulated for the general extension of the business in every branch. Mr. Betz naturally remains with the company as President and Chairman of the Board of Directors. The changes will not affect the policy of the concern as to its methods of manufacturing and selling goods, but the infusion of new blood will mean greater activities and further extensions in every way.

The growth of the Frank S. Betz Company is another illustration of the remarkable success that can be achieved by a man of untiring energy and devotion to his work. He has built up this large business practically unaided without the assistance of outside capital or borrowed money. It really represents the earnings on his original investment.

The new members of the firm are for-

tunate to align themselves with an established business house that has never carried a dollar of indebtedness except current bills for merchandise. With such a reputation for financial integrity, the plans of the new management seem assured of success.

ABDOMINAL SUPPORT IN TREATING INTESTINAL STASIS.

The importance of proper abdominal support in the treatment of intestinal stasis has been emphasized by Sir Wm. Arbuthnot Lane. Many and various are the belts and supporters that have been recommended, but for actual serviceability there is nothing that gives such satisfaction as the Storm Abdominal Binder. In order to accomplish its full benefits an abdominal belt must furnish real support without constriction. The Storm Binder meets these requirements in every way, and is so comfortable that it can be worn constantly by the most fleshy and obese patients. It certainly solves the problem of abdominal support and without the discomfort that has made so many other appliances for the purpose impractical and valueless.—From American Medicine, April, 1915.

FORD CAR OWNERS.

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ORIGINAL ARTICLES

REFLECTIONS ON MODERN METH-ODS OF TREATMENT BY SERA AND VACCINES.*

W. S. THAYER, M. D., Hon. F. R. C. P. I., Baltimore, Md.

When your President so kindly asked me to speak before this Society it seemed to me that a suitable subject would be a series of reflections upon certain prevalent therapeutical methods, for after all there have, in the last twenty years, been great changes in our methods of the treatment of disease—changes which well deserve consideration more careful than is sometimes given them.

The past century has revolutionized the practice of medicine. As the speaker observed ten years ago at St. Louis,† medicine has changed in this time from a more or less speculative art to an art resting upon firm scientific foundations.

The great features of the last fifty years of medical progress have been first, the development of our knowledge of infections, and secondly, the advance in our comprehension of chemical and physical processes and their application to the study and treatment of disease.

The information which we have gained as to the cause of many infectious diseases and as to the manner in which the infection gains entrance, has given us the power to control largely many processes which but a few years ago were dreaded pestilences, especially fearful because of our ignorance as to their nature and source.

But during the greater part of the last century with all the advances made in our knowledge of disease, like progress had not been made in its treatment. By observation and empirical methods, much had been done to alleviate suffering, but it was yet true that the specifics remained but two—mercury and quinine.

A great advance toward new and specific methods of treatment was made in 1880 with Pasteur's classical observation that animals when treated systematically by doses of pathogenic bacteria of a virulence below that necessary to produce a fatal result, are rendered, on recovery, more resistant or truly immune to subsequent infections.

In 1884 Theobald Smith and Salmon‡ made the remarkable statement that immunity may be produced by introducing into the animal body the results of bacterial growth in culture fluids. In 1888-90 Roux and Yersin¶ showed that Bacillus Diphtheriae produced in its growth a soluble toxic substance of albuminous nature which, when introduced into animals, produced symptoms similar to those following inoculation with the organisms themselves, and in 1890-94 Behring, Kitasato, Roux and others demonstrated in the blood of animals to which sublethal doses of diphtheria toxine had been administered and of individuals con-

^{*}Address in Medicine before the South Carolina Medical Association, Greenwood, S. C., April 21, 1915.

Originally published in the Journal of the South Carolina Medical Association and reproduced with the permission of the editor of that publication and the author of the article.

[†]The Problems of Internal Medicine, Science, N. Y., N. S., 1904, XX, 706-715.

^{\$}Bull. Acad. de Med., Par., 1880, 28, IX, 121-134; ibid, 390-401; ibid, 527-531; ibid, 1119-1127.

[‡]Proc. Biol. Soc., Wash., 1884-6, III, 29-33, ¶Ann. de l'Inst. Pasteur, Par., 1888, II, 629-661; 1889, III, 273-288.

valescent from diphtheria an antitoxic substance which, injected into another animal, not only acted as a preventive but in the actual presence of the disease, by neutralizing the poison present in the circulation, brought about a rapid disappearance of the symptoms of the malady. Here at last, was a new and truly specific treatment discovered, not by accident, but by a series of carefully planned and accurately executed experiments. This was associated with the demonstration of the existence and value of anti-tetano-toxine.

Almost at the same time George Murray introduced a truly specific method of therapy of quite another sort in his demonstration of the efficacy of the treatment of hypothyroidism by the administration by the mouth of glycerine extracts of the thyroid gland. It is, however, especially upon the specific treatment of infections that I would dwell today.

Time unfortunately has shown that the number of pathogenic bacteria, the activity of which is due to soluble toxines produced by the growth of the organism, toxines to which a corresponding protective antitoxine is developed in the infected animal, an antitoxine which may be used as a specific remedy or preventive against the disease, is very small and practically restricted to the bacteria of diphtheria, tetanus and the unusual disease, botulism. With the greater number of pathogenic organisms the poison is, for the most part, closely bound up with the substance of the bacteria themselves and is set free especially on the occasion of the death and dissolution of the micro-organisms.

But it was discovered that on infection with these organisms whose poisonous effects are produced in a different manner, as well as on the injection of foreign proteid substances non-poisonous in themselves, the infected animal responds by the production of anti-bodies—cytolysins, agglutinins, opsonins, precipitins, whatever they may be

called—substances the main object of which, as pointed out by Zinsser in his recent Harvey Lecture, seems to be the removal or destruction of the foreign substance inoculated. The presence of these specific todies in the blood and the possibility of their demonstration by a variety of physical and biological procedures has led to a number of valuable methods of diagnosis, such as the agglutination tests, the precipitin test for human blood, the complement fixation tests for various infections, especially for syphilis.

The *prophylactic* introduction of sera of animals immune to infection of this class has unfortunately proved of little value, and from a *therapcutic* standpoint also, the results following the introduction of such immune sera have been disappointing.

However, in instances where the infection is localized, as in cerebro-spinal meningitis, it has been found possible largely to control the infection and to save a considerable portion of individuals who otherwise would fall prey to the disease by the use of concentrated sera containing the antibodies, introduced directly at the seat of infection. More than this Cole has recently shown that in pneumonia where the strain of pneumococcus causing the infection is determined accurately, the introduction of a large quantity of a specific anti-serum may exert a considerable curative effect.

It has, however, been determined that a considerable degree of *immunity* may be assured against a number of diseases, such as cholera, plague and especially typhoid fever by properly carried out *vaccination* with increasing doses of *dead* bacteria. These dead organisms set free a certain amount of poison and the animal body responds by the production of antibodies which, when after repeated injections, they have become sufficiently numerous, form a considerable protection against future infections so long as they remain present in the blood.

Yet another interesting attempt to in-

crease the resistance of the infected animal is represented by the practice of vaccinating the already infected individual with living or dead bacilli with the idea of further stimulating the production of antibodies. This method we may regard as having first been introduced by Koch in the treatment with old tuberculin. Old tuberculin, as is well known, consists essentially of an extract of the substance of tubercle bacilli, and the injection of this substance often produces remarkable local and general effects in the infected individual. It was early found, however, that large doses producing sharp reactions diminished rather than raised the resistance of the patient, and later the treatment by repeated introduction of very small quantities of tuberculin, too small to produce actual febrile reactions, has been practiced widely in different parts of the world. Although some have fancied that they have seen beneficial effects from this treatment, much, however, can not as vet be said.

The work of Wright and his studies on the opsonic index have, however, led to the widespread practice of vaccination with dead cultures of pathogenic micro-organisms in a large variety of diseases. Wright believed that he could show that, as the result of vaccination, the phagocytic power of the leucocytes could be increased greatly. The hypothetical substances which increase this phagocytic power he called "opsonins." He fancied that he could follow in the blood the variations in the phagocytic activity of the leucocytes in association with the rise and fall of these protective opsonins, and governed his treatment by control observations on the blood in the laboratory.

Studies of the methods of estimating the opsonic index in this country have not altogether upheld the assertions of Wright. His original methods were too crude to justify positive, definite conclusions, and indeed even with more careful procedure, most observers have felt that it is not easy

to confirm his results. The practice of vaccination in many classes of infections, without control by regarding the opsonic index, is however widespread in many parts of the world, especially in England, and there is reason to believe that in some conditions good results are to be obtained.

In connection with our studies of infection and the mechanism of defense of the animal body, a phenomenon of great practical importance was brought to light by the observations of Richet, Theobald Smith and Arthus. As with so many great discoveries the observation was not new; but in the old days the significance of the phenomenon was not appreciated. Magendie* injected into the jugular vein of a dog a considerable amount of egg albumen in water without much ill effect. Later on attempting to repeat the experiment on the same dog by way of the cartoid, he was surprised to find that the dog died rapidly before he had introduced more than a drachm of the fluid. Portier and Richet in 1902,† noticed that the poison extracted from the tentacles of actinia killed rapidly and in much smaller doses when introduced into dogs which, two or three weeks before, had had a non-mortal dose. Arthust observed that horse serum injected into rabbits in repeated doses at intervals of several days produced finally grave symptoms both local and general. Theobald Smith§ in 1903 made the extremely important observation that in guinea pigs to which diphtheria antitoxine had been administered without demonstrable symptoms, a second dose given a week or ten days later produced instant death. Since then it has been shown that most, if not all the foreign albuminous substances

^{*}Lectures on the Blood, etc., English translation, 12.89, Phila., Haswell, Burroughs & Haswell, 1839, 247 ct scq. †Compt. rend. Soc. de Biol., Par., 1902, LV,

^{170-172.}

[‡]Compt. rend. Soc. de Biol., Par., 1903, LV, 817-820.

[§]Otto (R.), Gedenkschr. f. d. verbstorb. Generalstabsarzt d. Armee **** v. Leuthold, Berl., 1906, I, 153-172.

when injected into the animal body, give rise to a reaction in that organism characterized by the production of antibodies designed probably as has before been said, to destroy the foreign albumen. Now with poisonous bacteria these substances act promptly by killing the invading organisms. But the process of destruction of these invaders by the antibody is unfortunately not wholly devoid of significance. As von Pirquet has pointed out, the period in the course of an infection at which these antibodies first appear and meet with and attack the poisons is associated with phenomena, fever and other general symptoms, which form probably a part of that which we recognize as the symptoms of the specific disease. If at a latter period when the protective antibodies are already present in the animal's blood, poisonous bacteria gain entrance, they are immediately destroyed before they have multiplied sufficiently to form an actual quantity of foreign albumen sufficient to give rise through their destruction to any appreciable symptoms. This von Pirquet has illustrated most beautifully in the process of ordinary vaccination. There, as we all know, in the susceptible individual, a period of seven or eight days passes before anything is observed at the site of vaccination and then, suddenly, the characteristic local and sometimes general reaction begins. During this incubation period the pathogenic invaders have been increasing in number and the human organism has been preparing its protective antibodies. When these antibodies are set free in large numbers and attack and destroy the poisonous invaders the local and general reaction begins.

Suppose, however, we vaccinate an individual who has already in his circulation the protective substance. What do we notice? Within 24 hours after the vaccination the point upon the arm swells a little, begins to itch and looks as if it might be beginning to "take," but within a very short time this abortive "take" has passed by.

What has happened? The probability is that here the already present antibodies have attacked immediately the poisonous organisms which have been introduced, and destroyed them before they have been able to multiply to any considerable extent. The result has been that the amount of poison set free by the meeting of the antigen, as the poisonous organism is called, and the antibody has been sufficient only to produce a minute local lesion and no general effects.

But with the introduction of a foreign albuminous substance the question becomes somewhat different. Such a substance may be relatively harmless in itself to the organism into which it is introduced. It may be non-poisonous as in the case of horse serum, for instance, in ordinary individuals. But this non-poisonous substance gives rise nevertheless to the development of antibodies, and when these antibodies have been produced, a week or ten days, let us say, after the first injection, the re-introduction of the foreign substance, if the quantity be sufficient, may result in the gravest of symptoms, even in the death of the animal. It would appear that these grave symptoms which develop on the second injection of a foreign proteid are directly associated, as in the case of bacteria, with the meeting of the antibody and the antigen and the setting free of some poison. The severity of the reaction varies with the quantity of the foreign substance introduced, and the reason that the reaction may be so slight or absent in the case of bacteria and so dreadful in the case of a foreign albumen is explained probably by the small quantities of the actual albumen present on the introduction of bacteria, and the relatively large amounts which are introduced when we inject directly a foreign albumen such as horse se-

In other words, it appears that the animal body into which foreign bacteria or albumens are injected becomes "sensitized" to these substances, that is, it contains antibodies. This hypersensitiveness to bacteria which results in the protection of the animal body we call immunity.

The hypersensitiveness toward non-poisonous foreign albumens, fundamentally similar to that which, in the case of bacteria, constitutes immunity, may be a grave danger to the animal organism; the phenomena by which it becomes manifest on the introduction of the antigen we speak of as anaphylaxis or better, in the words of you Pirquet, allergy.

I have gone into this matter at considerable length because it has seemed to me sometimes that in the use of these new methods of prevention and treatment of disease which have brought such immense benefit and even greater hope into our practice, we are sometimes forgetful that we are dealing with procedures which may give rise to dangerous manifestations, with substances which should be used with at least as great care as that which we exercise in the use of other mineral or organic compounds of the pharmacopoeia.*

Antitoxines.

Let us now consider certain specific methods of treatment, and first, naturally, the question of diphtheria. Now the diphtheria bacillus as we have said, produces in the process of its growth, a soluble toxic albuminous substance—the diphtheria toxine—and the animal into which this diphtheria toxine is introduced, provided the dose be not lethal, responds by the production of an antitoxine which neutralizes the poison and protects the individual. There has been no greater blessing con-

ferred upon the human race in the lifetime of most of us here than this great discovery which has saved so many thousands of children. How may this antitoxine be prepared? How is it ordinarily produced? As is well known, the method of production of the antitoxine used in practice consists in the immunization of a horse by progressively increasing doses of toxine. When the highest degree of immunity is reached the horse is bled and the serum obtained and standardized in such a manner that the exact strength may be known. It is measured in units, a unit being that amount of antitoxine, 1 c.cm. of which will neutralize one hundred times the fatal dose of toxine for a guinea pig of 500 grammes. The mixture of such an antitoxine with a bouillon solution of toxine in quantities will in great part remove its toxicity. Furthermore, the injection of a sufficient quantity of antitoxine into the human being will render him immune for a certain period of time to infection with diphtheria bacilli. And more than this, unless the disease has progressed too far, the injection of a certain quantity of antitoxine will soon interrupt the course of an already acquired infection.

From a prophylactic standpoint various recommendations have been made as to the quantity of diphtheria antitoxine which should be given, but the careful studies of Schick have made it fairly clear that a dose of 50 units per kilogramme (2 and 1-5 pounds) of body weight is sufficient in almost all instances.

Now in the treatment of an actually existing diphtheria, the doses of antitoxine given have varied very greatly. Because of the neutralizing relations of toxine and antitoxine, the assumption has been made that enormous and repeated doses should be given in order to counteract any possible subsequent toxine production in the body, and huge doses have been administered, not only singly but repeatedly with intervals

^{*}For the history and discussion of the subject of allergy and anaphylaxis the reader may consult the following articles: Anderson (J. F.) and Rosenau (M. J.)—Anaphylaxis—Arch. Int. Med., Chicago, 1909, III, 519-568, Pirquet (Cl. Fr. v.) Allergy, ibid, 1911, VII, 259-288; 383-440, Zinsser (H.) Harvey Lecture—To appear shortly in Arch. Int. Med. Auer (J.) The functional analysis of anaphylaxis. Forchheimer's Therapeusis of Internal Diseases, N. Y. and London, D. Appleton & Co., 1914, V, 39-112.

of several days, and often with apparently brilliant effect.

But the use of diphtheria antitoxine is unfortunately associated with certain distinct inconveniences and indeed with some danger, for after all one must remember that it is not only the antitoxine that one is administering, but antitoxine in solution in horse serum, a substance harmless in itself on the first dose in the immense majority of individuals, but yet capable of causing the formation of antibodies in the patient to whom it is administered, so that at a sufficient period later, reinjection finds the patient sensitized with the result that inconvenient or grave symptoms may follow. And this is sometimes observed in the administration of horse serum to patients. Ordinarily an injection of horse serum containing antitoxine produces no unpleasant immediate results, but not infrequently a week or ten days afterwards, there appears an annoving urticaria, sometimes patches of oedema, sometimes joint pains, together perhaps with a little fever. These symptoms are, however, usually transient and soon pass by. Let us, however, suppose that ten days or two weeks after this first injection of diphtheria antitoxine in horse serum a second dose is given. Almost immediately upon the introduction of this second dose symptoms follow which may be all the way from merely distressing and inconvenient manifestations to grave and even dangerous occurrences. The patient may have extensive oedema at the point of injection, a general urticaria, nausea, vomiting, rapid pulse, dysphoea, perhaps grave asthmatic symptoms, syncope and even death. In the adult where the quantities of horse serum introduced are relatively small compared to the size of the individual, the symptoms are usually more inconvenient than dangerous; nevertheless there are grounds for caution.

What has happened? In the first instance, what is commonly called serum disease has occurred. The introduction of the

foreign serum has produced the reaction in the body to which we have above referred —the production of specific antibodies to the horse serum; but these arise so slowly that at the time when they are set free the amount of foreign serum in the blood is slight; indeed, it may be entirely absent. If it be present in slight quantities the result of the meeting of antigen and antibody is evident usually in mild, transient symptoms such as those to which we have referred. But if a large dose of foreign serum be introduced into an animal or human being a week or ten days after a previous injection of the same serum, i. e., into an organism already sensitized and containing a considerable quantity of specific antibodies, then the meeting of antibody and large quantities of antigen may set free a large amount of poison and grave manifestations of anaphylaxis or allergy occur.

Now if one remembers the observation of Arthus to which I referred to before, namely: the frequent occurrence of oedema and grave symptoms in guinea pigs on *repeated* injection with a foreign serum after some days of intermission, one can readily see that this is exactly what one might expect in human beings. We might well ask ourselves whether, with the repetition of doses of diphtheria antitoxine after a few days of intermission, similar unpleasant symptoms might not occasionally occur; and it is true that they sometimes do.

Fortunately, however, the researches of Schick* and others have shown clearly that these repeated doses are unnecessary. The chief value of antitoxine is in its immunizing effects. It has some neutralizing influence on a toxine introduced from three to six hours before, but only a little. The great effect is upon toxines introduced at the same time or developing later, and careful studies have shown that while very large doses, perhaps as large as 500 units

^{*}Schick (B.), Kassowitz (K.), and Busacchi (P.): Ztschr. f. d. ges. exper. Med., 1914, IV, 83-148.

per kilogramme of body weight, may have a maximal effect if there be a large quantity of toxine present at the time of introduction, yet in all ordinary cases 100 units of antitoxine per kilogramme of body weight gives the maximal effect. And furthermore, and this is very important, it is never necessary to repeat the dose—a single dose is sufficient.

In a given case of diphtheria then, the antitoxine should be given so soon as possible, and the proper dose is 100 units to the kilogramme of body weight in ordinary cases. It should be given by deep intramuscular injection. In the most severe cases 500 units per kilogramme may be administered. That is, in a child of twenty kilogrammes (44 pounds) 2,000 units will be enough in 90 per cent of the cases. In very severe instances, however, 10,000 units may te given. In an adult weighing 60 kilogrammes (132 pounds) 6,000 units is usually sufficient, but in very severe cases 30,000 units may be given. It is never necessary to repeat the dose. In the words of Schick, "repeated doses should be abandoned as wholly superfluous."

But when this has been said, we have still to bear in mind an extremely important circumstance, and that is this—a certain small proportion of individuals possess as a natural peculiarity an extraordinary hyper-susceptibility toward horse serum, while others have become hyper-susceptible as the result either of a previous injection of diphtheria antitoxine or of horse serum for some other purpose. In such individuals the introduction of any appreciable quantity of horse serum may produce symptoms of the utmost gravity. These symptoms may be rapid, almost immediate, varying from vertigo, dyspnoea, tachycardia, syncope, cessation of respiration and death, to the lesser symptoms of oedema, urticaria, nausea and other symptoms of serum sickness. The severe and dangerous manifestations of hypersusceptibility are very rare, and yet they

do occasionally occur. Those individuals who are naturally hypersusceptible are commonly sufferers from asthma, hay fever, rose colds or subjects of urticaria or angoneurotic oedema. One should always inquire into the history as to these conditions before administering antitoxine, and, in an asthmatic subject, every precaution should be taken.

To make the point clearer let me mention a few specific instances. Seventeen years ago while treating some cases of diphtheria I took a preventive inoculation of about 1,000 units of diphtheria antitoxine in perhaps 5 c.c. of horse serum. About six months later another child with diphtheria coughed into my eve. Again I took a prophylactic dose. Almost immediately, at the seat of inoculation, a violent urticaria began. This spread over my entire body and was associated with nausea, headache and considerable prostration, which lasted for two days-a good example of the ordinary manifestations of allergy in an adult as the result of a previous injection of serum.

A child, I think under five years of age, the daughter of an old friend of mine, an assistant in the pathological laboratory in Berlin, was given in the early days of the treatment, an injection of diphtheria antitoxine and died instantly upon its administration.

Diphtheria developing in a family, the Health Warden of the district gave preventive doses of antitoxine to all members of the household without consulting the family physician. One of the children died instantly upon receiving the injection.

A year or two ago diphtheria appeared in a well known boys' school in the north. A general preventive inoculation was carried out. One of the boys came in from the football field, was given his injection, started back toward the field, suddenly felt dizzy and faint, had a peculiar suffocating sensation and in a few minutes was dead.

Such instances as these latter are among

10-15

the most awful experiences of medical practice, and such possibilities, rare though the event may be, are quite enough to make one hesitate to use such a method of treatment.

Can we avoid such manifestations? If so, how?

Happily it is perfectly possible to avoid them, and no one, in the present state of our knowledge, is justified in giving a prophylactic dose of antitoxine without taking certain definite precautionary steps. In the first place the studies of Schick of Vienna* have given us a most interesting and valuable method of testing the susceptibility of an individual to diphtheria infection. It is well known that many individuals may be exposed to diphtheria without acquiring it, and Schick has given us a method of detecting these individuals who are truly insusceptible to the disease. It has been shown that the introduction of a small quantity of diphtheria toxine into the skin produces within 24 hours a local reaction similar to that occurring in a positive tuberculin test, and dependent upon the irritating qualities of the toxic substances introduced. Such a reaction occurs only in those subject to the disease, i. e., individuals who do not possess antitoxine in their circulation. These interesting observations have been confirmed by Park, Zingher and Serota,† by Kolmer and Moshaget and by others. Those who fail to show this reaction to diphtheria toxine (Schick's test) are immune, insusceptible to diphtheria and need no prophylactic treatment.

Studies of the susceptibility of individuals of different ages carried out by Park, Kolmer and Schick show, if we combine their statistics, the following interesting figures:

Percentage of susceptible individuals. Positive Reactions

Ago				
Unde	r one	year	 13	per cent
1-5			 57.8	per cent
5-10			 50.1	per cent

^{*}Muenchen, Med. Wchnschr., 1913, LX, 2608-2610.

Over 15					
Incidence of diphtheria according to age. Age 14,000 cases (Kolmer).					
Under one year 3.2					
1-5					

This shows that in at least fifty per cent of individuals preventive inoculations are wholly unnecessary.

10-15 8.1 per cent

Over 1511.4 per cent

The method of performing the test is simple. The amount of toxine to be introduced should be from one-fortieth to one-fiftieth of the minimal dose of diphtheria toxine lethal for a guinea pig in four days, so diluted (Schick and Park) as to be contained in from .1 to .2 of a cubic centimetre. The toxine unfortunately deteriorates very rapidly and must be made fresh, so that the test is possible only where one is in touch with a reliable laboratory. But if as seems certain, the value of the test is upheld, health departments local and central, will have to make arrangements to supply the necessary substance.

Kolmer's directions for making the test are as follows:

"The injection is made intracutaneously by pinching up a fold of skin between the index finger and thumb and inserting the needle into the epidermis. As the injection is made a whitish spot develops and a slight stinging pain is felt; if this raised anaemic area is not seen the injection is probably too deep and unsatisfactory.

A very fine needle (No. 26) and a perfectly adjusted syringe are necessary. We have used with much satisfaction the Ricord and Fournier's tuberculin syringes. Platinum iridium needles are especially useful, as they are readily sterilized in a flame and are thus adapted for giving a large series of injections.

Injections are readily given in the skin of the arm near the insertion of the deltoid muscle after cleansing with alcohol and drying the skin.

[†]J. Am. M. Ass., Chicago, 1914, LXIII, 859. ‡Am. J. Dis. Child, Chicago, 1915, IX, 190-204.

The reaction. This appears in from twenty-four to forty-eight hours after injection and is characterized by an area of erythema with a brownish tinge measuring from 0.5 to 2 cm. in diameter and accompanied by slight oedematous infiltration of the underlying tissues. In colored persons the erythema can usually be seen, although not always sufficiently well to measure, but the oedema is readily palpable. The reaction usually reaches its height in from fortyeight to seventy-two hours and then begins to fade within a week or ten days, accompanied by some itchiness and usually followed by a brownish pigmented area of some days' or weeks' duration. A slight superficial scaling, due to the necrosing effeet of the toxin on the superficial epithelial cells is generally noticed. In the majority of instances there is no general reaction."

Kolmer gives a dose less diluted than do Schick and Park, using one-fortieth the minimal lethal dose of toxin so diluted with sterile salt solution containing 0.25 per cent phenol that is contained in 0.05 c.c. He feels that with the smaller amount of fluid less trauma is produced and less doubt exists with regard to the reaction. The full details may be found in Kolmer's excellent article in the March number of the American Journal of Diseases of Children.

The test may be made by means of von Pirquet's scarifier, but Kolmer prefers the intracutaneous method.

In such a manner then, we may gain rapid information as to the susceptibility to diphtheria of any given individual. In a large proportion of individuals prophylactic treatment is, thus, unnecessary.

But suppose prophylactic treatment seems desirable, what steps should we take to avoid a possible allergic reaction?

One should always make a preliminary injection of one to three drops of antitoxine and wait from one-half to two hours to observe its effect. If there be no appreciable result one may safely administer the de-

sired dose. If, on the other hand, there be a sharp reaction of urticaria or oedema, or if, as rarely occurs, there be general symptoms, one must take other steps. If there be merely urticaria and oedema at the seat of injection, after one-half to two hours or less one may give a second dose of one c.c. and then, after a second period of two hours, the full dose may safely be given, for it has been shown that a desensitization may be rapidly carried out.

If graver symptoms, such as vertigo, have occurred, it may be safe to give after the first dose, several gradually increasing injections at one or two hour intervals before giving the sufficient dose.

If, however, grave symptoms occur on the first introduction of a drop or two, vertigo, fainting, dyspnoea, nausea, tachycardia, oppression, asthma-like manifestations, one may consider the advisability of omitting further attempts at prophylaxis. But if the exposure has been serious it will probably be safer to continue with increasing doses as has just been advised. One may adopt, as the first step, the procedure advised by Besredka of giving 50 c.c. of antitoxine by rectum.

Suppose, however, that we are in the presence of a fairly developed case of diphtheria. Should we hesitate to give a full dose immediately? We should, I think, always try a preliminary injection of a few drops of antitoxine and wait one-half to one hour. The length of time for desensitization in such cases is not very great, and the risk is too large.

A most interesting example came to my attention but a few days ago. My friend, Dr. Thomas F. Branson, of Rosemont, Pennsylvania, was called to a neighboring college to see a student with diphtheria. As soon as the diagnosis was established, to use his own words, "Steps were taken to give the specific treatment. As has been my habit for many years, after the introduction of the needle, about 2 to 4 minims of

the antitoxine were injected. I then waited for twenty minutes to note untoward effects. In the present instance after about five minutes there was a sudden blanching of the face, pupils were much dilated, lips white, pulse which had been about 90, rose to 120 and was thready, respirations were slow, shallow and sighing. The patient's complaint was, 'I cannot breathe.' sciousness was not lost. * * * In about half an hour all symptoms had passed. A few hours later the patient was seen with Dr. McCrae in consultation, and it was determined to give a few minims as a second dose, in the belief that the factor of danger in this case would have been overcome by the earlier administration. About 12 c.c. of serum containing 3,000 units of antitoxin were given at this time, the administration consuming a period of about one and a half hours. No physical signs were present during the second injection. Subsequently about 9,000 units were given or in all a bulk of perhaps 50 c.c. of serum. At none of the subsequent injections was there any systemic reaction." It is highly probable that in this instance the patient's life was saved by the prudence of her judicious attendant.

If by chance we should meet with a patient who shows a high degree of hypersensitiveness to a very small amount of horse serum, one may hesitate in attempting further treatment. But just such an experience as this would justify one to making the attempt if the case were truly urgent. In such cases we should proceed with gradually increasing doses at half hour intervals till the full dose be given. Or if it seem wise, one may at first try a rectal injection of 50 c.c.

If, then, we bear this possible danger in mind, and if we remember that 50 units per kilogramme of body weight is a sufficient prophylactic dose, and that 100 units per kilogramme of body weight is a sufficient therapeutic dose in all ordinary cases of

diphtheria, except in very grave instances where 500 units per kilogramme may be given, and lastly, if we remember that a single dose is quite sufficient and that additional doses are not only unnecessary but unwarranted, we shall be in position to obtain the greatest possible benefit from this most valuable and truly specific method of treatment.

A consideration of the phenomena which occasionally occur as a result of the administration of diphtheria antitoxine should impress upon us very strongly the truth that the introduction of a foreign serum into the human organism is by no means a simple procedure or one that is to be entered into carelessly.

The one other malady for which we possess a true spicific antitoxine is tetanus, but unfortunately the treatment is rarely efficacious after the symptoms have appeared for the reason that the poison has passed rapidly upward through the nerves into the central nervous system and has attacked the ganglion cells of the nervous centres. At this period, injection of antitoxine has little effect. Von Behring* advises a prophylactic subcutaneous dose and, if the wound continues angry, a local injection at the seat of infection.

Von Behring further advises, if the disease has already broken out, a local injection at the point of infection as well as an injection intravenously. He also advises the introduction of antitoxine into the nerve trunk leading from the region of the wound. But this is not easy to do and recent observers have reported remarkably good results from the early introduction of antitoxine by lumbar puncture. In this manner the antitoxine not only rapidly reaches the nerve centres but also enters the general circulation, while when introduced into the general circulation, it does not reach the nerve centres in any appreciable quantity.

^{*}Deutsche Med. Wchnschr., 1914, XL, 1956.

Park† advises as an immunizing dose the immediate injection of 1,000 units of antitoxine and it may be well to follow Von Behring's advice and to give a little more at the site of the wound.

In the treatment of an actual case of te-

tanus Park advises the intraspinous injection of 500 to 2,000 units in a child according to its size and 3,000 units in an adult. The amount of fluid should be as large as may be injected without producing pressure symptoms—5 to 20 c.c. In addition to the intraspinous injection, Park advises intravenous treatment, the dose amounting to 2,000 units for ten pounds of body weight. These two injections, he says, practically suffice for the antitoxine treatment, as the blood will remain strongly antitoxic for five days. It goes without saving that before giving a preventive dose of tetanus antitoxine the same precautions should be taken which are taken with administering horse serum with diphtheria antitoxine. It is fair to say, however, that if we meet with an instance of already established tetanus there is no time to spare and most of us would prefer to take the risk in making our injection immediately.

Antisera.

Now let us consider for a minute what we may do to combat infections with those organisms, the deleterious effect of which is not due primarily to soluble toxines. Here, as has been said, the infection is normally brought to an end by the development of antibodies—precipitins, agglutinins, bacteriolysins, opsonins—whatever they be called, which tend to favor the destruction of the infecting organism. Unfortunately, it is apparently true that in order to produce any effect sufficient to be of great value, the antisera have to be introduced in quantities so large as to make effective treatment very difficult or impossible.

Few results worthy of serious consideration have been obtained in severe general infections. In cerebro-spinal meningitis, however, where the infection is localized, we have a most valuable method of treatment, which consists in the repeated introduction of the antiserum directly into the cerebro-spinal canal—the seat of infection. The antibodies are thus able to reach the seat of infection in a degree of concentration sufficient in a considerable proportion of cases, to bring about a satisfactory result.

Moreover, in bacterial dysentery results of some value have been obtained by early, large and repeated doses of antiserum, especially in small children. The use of antisera in most other general infections has, however, proved disappointing. In cholera, in plague, in typhoid fever little has been accomplished. Attempts have been made to produce antistreptococcus sera, but without satisfactory results. One reason possibly is the circumstance that there are so many varieties of streptococci which, with our present methods, it is impossible to recognize and distinguish.

Polyvalent sera have had little better results; and I am unaware of any thoroughly satisfactory evidence of the essential value of any of these antisera. Nevertheless, it is conceivable that in streptococcus infections if it were possible to identify just the strain of organism and to introduce a sufficient quantity of an immune serum, some help might be obtained.

In pneumonia, thanks to the researches of Cole, Dochez and others‡, some progress seems to have been made. As you know, Cole has distinguished four main types of pneumococci which may be distinguished by laboratory methods. In two of these forms special antisera have produced apparently an appreciable result, but here at

[†]Forchheimer's Therapeusis of Internal Diseases, N. Y. and London, Appleton, 80, 1914, V, 469 et seq.

[‡]Dochez (A.R.) and Cole (R.I.) Pneumococcus Infection: Forchheimer's Therapeusis of Internal Disease, 80, New York and London, D. Appleton & Co., 1914, V, 472-508.

present the doses of serum have to be very large. The effort is now being made to find some methods by which this and other difficulties may be obviated.

In all these maladies again, wherever the question of the introduction of a foreign serum arises, the same precautions should be taken. Where there is a serious question as to whether the introduction of the serum is going to be of any value, we should be much more careful about taking risks. We should always remember the possibility, slight though it may be, that one may meet with an hypersensitive patient. One should never administer a large dose of such serum to an individual with a history of asthma; one should always ask whether there has been previous hypodermic treatment with horse serum, and if this is the case, one should proceed carefully with minute and increasing doses at short intervals.

Vaccines.

Prophylaxis. But it is not only by the production of a passive immunity through specific antitoxines and antisera that we may seek to combat disease. The oldest prophylactic methods have been attempts to produce active immunity by means of the production of the disease itself under favorable conditions, as in the old inoculation for smallpox, or by vaccines with attenuated cultures such as is practically the case in cowpox or in the vaccination introduced by Pasteur in chicken cholera and in anthrax. In more recent times, following the observations of Pfeiffer, attempts have been made to produce an active immunity in a variety of diseases by the introduction of dead cultures of the specific organism in increasing doses. Thanks especially to Wright, the value of such vaccination against typhoid fever has been shown to be very great, the results in the United States Army having been especially creditable and striking. The same is true to some extent in various other diseases; vaccination with dead cultures gives a certain degree of immunity against cholera and plague and dysentery, and it is not impossible that improved technique may offer material protection against many of the more dangerous epidemic fevers.

In most of these conditions there is no material danger in the procedure of vaccination provided the quantity of organisms introduced is not too great, and provided the vaccine has been properly prepared. At the present moment the gravest danger would appear to lie in the rare but occasional contamination of smallpox vaccine with tetanus, and the possibility that the vaccine may be, as we have indeed observed recently in connection with a certain typhoid vaccine put forth by a reputable firm, quite inert.

Vaccine Treatment.

But another question has arisen in recent vears which is of considerable importance in the practice of medicine today, and that is the question of the possibility of the use of vaccines in the treatment of existing diseases. The principle on which vaccination in the treatment of infectious diseases has been introduced is that of stimulating the organism to produce protective anti-substances quicker and more thoroughly than it has been doing, and thus to hasten the end of the infection. This is accomplished by introducing an additional dose of the poisonous organisms already present, in such condition, however, that they are capable of further propagation. Such treatment would seem to be especially reasonable in localized infections of moderate extent, or in infections from which perhaps the bacteria enter into the blood only at intervals. Here an extra impulse to the formation of antibodies given by vaccination, might reasonably be expected to give additional powers of resistance to the organism. But if the process be a severe general infection where the fight between the invader and the host is still undecided, one may well ask the question whether the introduction

of an additional quantity of the poisonous antigen (in such cases the infecting bacteria) may not be a rash or dangerous procedure; for why should we not, in this manner, add strength to the already threatening intoxication; why might not our very interference be that which finally decides the day in favor of the infectious agent? How can we tell that our small contribution may not be just the reinforcement which is necessary to give the battle to the enemy?

These are the thoughts which naturally come to the mind of the serious man who considers the question of vaccination as a therapeutic procedure. All of us who lived through the excitement associated with the production of tuberculin cannot fail to have seen the harm which may be done by a procedure which is practically a vaccination; and if the possible danger of diminishing rather than increasing the resistance of the patient, that which according to Wright actually occurs during a brief period following vaccination, should be seriously considered. But with or without control by study of the opsonic index, vaccination with dead cultures of the infecting micro-organism has given apparently encouraging results in a variety of different conditions.

The most satisfactory results, I should say, have been in the treatment of local infections with staphylococci, especially in acne, furunculosis and rosacea. Here good influences are often obtained by the use of vaccines prepared from cultures made from the seat of infection, that is so-called autogenous vaccines.

A good deal has been written with regard to the treatment of complications of gonorrhœa by autogenous vaccines, but outside of infections with staphylococci there are grave differences of opinion as to the value of the results which have been obtained.

Tuberculin, of course, has been widely used, and there are observers who feel that some increase in the resistance of the patient

may be induced by the very careful administration of gradually increasing doses. All observers who have studied this matter deeply are in agreement, however, that such treatment demands very careful oversight by a trained observer.

Vaccination has been practiced in many different conditions. Some observers have thought that they have had good results in the treatment of local colon infections, cholecystitis, pyelitis, cystitis; others feel that some results have been obtained in the treatment of chronic bronchitis. In some instances the vaccination of typhoid carriers has apparently been successful. Few have had reliable results from vaccination with pneumococci or streptococci, although there are those who have fancied that they have seen improvement in some instances of arthritis supposed to be dependent upon local foci of streptococcus, especially s. viridans infection.

Exactly what we may hope to obtain from vaccination as a therapeutic measure has been admirably expressed by the greatest authority on this subject in America. Theobald Smith* says: "All parasites tend to increase the resistance of the host in which they live and multiply. Out of this universal fact a number of practical problems arise. In any given disease is it worth while to try to raise this immunity, and how much energy will it cost the patient? If worth while, what is the best and most sparing way of raising such immunity artificially? In any localized infection we must ask: Is this a beginning process without attendant immunity, or is it a residual process associated with general immunity? If the latter, vaccines may be considered safe. In processes associated with fever and bacteriemia, science says: Hands off! until we know whether we have a progressive disease with gradual undermining of the resistance or a more localized affection in which the excur-

^{*}An attempt to interpret the present day uses of vaccines. J. Am. M. Ass. Chicago, 1913, LX, 1591-1599.

sions into the blood are secondary. In any case the use of vaccines in these cases must be regarded as experimental, and should not be undertaken save by one trained in immunologic problems.

Judged from this point of view, as well as from the work of the laboratory as a whole, we should say that vaccines applied during disease will be rarely, if ever, life saving, but they may hurry a stationary or languid process which tends towards recovery, by bringing into play the unused reserves of various tissues."

It is easy to see from this that vaccination may be associated with real danger, and alas, I have seen clinical evidence of its ill effects more than once. It is of vital importance for us to remember that in introducing into the human being cultures of poisonous micro-organisms we are playing with dangerous arms; that our first duty is to avoid doing harm. We should remember that the very first step in the treatment of a given case by therapeutical vaccination should be the careful bacteriological study of that case, and a thorough understanding of the nature of the infection; that it is useless and worse than useless to vaccinate an individual with an organism which is not that causing his disease; that only under rare and occasional circumstances is it justifiable to vaccinate with any but an autogenous vaccine.

Within a few years, however, certain manufacturing houses have placed upon the market a number of bacterial vaccines which they rashly recommend as efficacious against a number of diseases, and notably against various forms of arthritis.

Now what conditions could justify us in using a vaccine in the treatment of a case of arthritis?

First, we should be assured that the vaccine is made from the micro-organism which is causing the disease; secondly, we should be assured that the use of the vaccine will not be harmful, and thirdly, we should have at least a reasonable assurance that

there is a likelihood that its use will be beneficial.

But the determination of the exact bacteriological cause of a given instance of arthritis is usually an extremely difficult matter, involving long and complicated bacteriological studies which can be carried out only in association with a good laboratory and a trained student, and even then it is usually only a matter of inference. Suppose, however, we have good reason to believe as a result of cultures from the blood or from the affected joints or existing local foci, that the arthritis is due to some form of streptococcus or pneumococcus infection; should we then be justified in using a stock vaccine? Under no circumstances, for we have no proof whatever that the organism is of the same strain as that from which the stock culture is made.

But suppose we have, after all, produced an autogenous vaccine, are we then safe in using this? Is there any danger of doing harm in the treatment of such a patient? The danger of doing harm may be little in some instances of chronic afebrile arthritis, but when we come to an acute arthritis with fever we must bear in mind that some of these conditions are also associated with a septicaemia and a complicating endocarditis in which the balance between attack and defense may be very delicate, and in which the introduction of an autogenous vaccine unless it be very carefully administered, may result in diminishing rather than increasing the resistance of the individual. I remember two cases of slow, chronic vegetative endocarditis due to streptococcus viridaus, one of them with arthritis, in which the clinical course clearly indicated that the sharp reactions following a vaccination had been the definite turning point of the malady towards its fatal issue. One can at the most say that vaccination in arthritis is in an experimental stage, and, although, in some instances, we may vet desire to make the experiment, it should be undertaken only on consultation with, and under the direction of one skilled

and experienced in these methods of treatment. The use of stock vaccines in the present state of our knowledge in any form of arthritis is a rash, dangerous and unwarrantable procedure, unscientific and unjustified from a standpoint of clinical experience, despite the assertions of the manufacturing pharmacists. The physician who allows himself to be led by the advertisements of manufacturing pharmacists is not a safe practitioner of medicine.

I speak of these anti-rheumatic vaccines only as an example. The same considerations apply to the employment of most stock vaccines with the single exception perhaps of staphylococcus vaccines as employed in acne and furunculosis, where in the absence of the *possibility* of obtaining an autogenous vaccine, one would not perhaps condemn wholly their careful trial.

Let us not forget that therapeutical vaccination is still in an experimental stage, As Professor Pearce* well puts it: "Prophylactic vaccination rests on a sound scientific basis of experimental study and clinical observation. * * * Curative vaccination has no sound experimental basis, but the application of the general principles of immunity as well as clinical observation offers a plausible basis for the treatment of localized, more or less chronic infections, and of 'carriers.' On the other hand, no satisfactory basis is at hand for curative vaccination in the acute, self-limited diseases characterized by general dissemination and systemic infection. All attempted vaccinations in this group must be considered as purely experimental."

Therapeutic vaccination is then a method of treatment into which the physician is not, as a rule, justified in entering without expert advice, and this has been well said by Wright,† himself, who observes that vaccine therapy demands "a man who has spent years of study to master the technique, to know how

to make the vaccines, to know where to look for the microbe, to know which are the most important microbes, to know how to isolate them, and most of all, a man with sufficient experience and ability to apply all these things."

But I have allowed myself to ramble too far already in these therapeutical reflections. What I have desired to do is to point out the great steps forward that we have been making toward a true, specific therapy of many diseases; but I have also wished to emphasize the truth that these methods of treatment are for the most part delicate, and must be applied thoughtfully, carefully and with full realization that there are dangers, rare though they may be, involved in their use, just as there are dangers in the use of any drug; and I have wished especially to insist that certain other methods of treatment, especially the therapeutic use of vaccines—methods still in an experimental stage, and in many instances unquestionably of an extremely delicate nature, have unfortunately become prematurely popularized and are being practiced today in an unscientific and dangerous manner—in just such manner as tuberculin was used twenty odd vears ago. While the practice of prophylactic vaccination has, in some instances, become a safe, useful and well established procedure, vaccination as a therapeutical measure is still, with a few exceptions, in an experimental stage, and is justified only under the direction and with the advice of a skilled bacteriologist and serologist; vaccination is not as a rule a method of treatment which the unaided clinician is justified in employing.

Let us not mar the really great scientific progress of the last thirty years—progress which has given us so much and from which we may expect so much more—let us not mar these great gains and endanger further advance by rash, hasty and unscientific practical generalizations.

^{*}J. Am. M. Ass., Chicago, 1913, LXI, 2115-2119. †Quoted from Pearce, op. cit.

A COMPOSITE BOARD OF MEDICAL EXAMINERS.

R. H. McGinnis, M. D., Jacksonville, Fla.

For the past month or more I have examined the Medical Practice Acts of nearly all of the states in the Union; those who have separate Boards of Examiners, as Florida has, and those who operate under a composite board. I am fairly well convinced that we, the oldest and most scientific profession engaged in the treatment of the sick and the prevention of disease, would make a mistake to amalgamate with the so-called drugless practitioners. The history of medicine reveals many pseudo-quasi-scientific shoots in the past which have had their day and disappeared, and, at the present time more and more cults and pathies are attempting to engage the public attention. If we associate now with one, how many years will elapse before we will have to consider the others?

The regular medical profession demands facts to sustain contention. Theories have to be proved beyond doubt to meet approval. Postulates are enunciated on proven conditions and every new finding must conform to established laws. With the drugless practitioner (and I would always designate him or her as a practitioner and not a doctor) we have very little in common. They may study the fundamentals of medicine, chemistry, anatomy, physiology, pathology, etc., but they interpret their knowledge of these branches very differently from us. "Osteopathy, as is generally known, originated in the dreams of a country doctor in Missouri about a quarter of a century ago. It is based according to its founder and prophet on the following propositions: The human body is a machine; disease is due to the dislocation of some structure in the body; the treatment of any abnormal condition is to find the dislocated structure and restore it to its proper position."

Pathology is certainly as exact as any

science, deviation so little from irrefutable laws and infallible conditions, when interpreted by reliable authority, that it may be ignored as one of degree and not of kind. On pathology, the medical profession bases its therapeutics. A patient with a valvular lesion, a decompensating heart, the usual train of symptoms, dyspnœa, anasarca, engorged liver, spleen and abdominal organs, etc., is not considered as suffering from pressure on a spinal nerve or dislocation of some structure. Diphtheria, a wellknown bacterial disease, a safe and sure therapeutic agent for its cure at hand and easy of administration, is treated by drugless practitioners as if some nerve needs relief from pressure, or, by prayer. Can the regular profession afford to offer its assistance to foster such pathology? To attempt to associate and co-operate with the drugless practitioner would lower the standards the medical profession has set up for itself, and endeavoring to maintain, and be a failure; as far as bringing them to an understanding of its principles and the knowledge it has gained through centuries of painstaking and persistent study. Is it not better to continue to advance the standards of the regular profession and devote our energies toward the education of the public? A slow process—admitted—but the only sure and lasting one.

I admit that the ideal regulation of medical practice would be through the operation of a composite board. I quote, "The responsibility for licensing of medical practitioners has been left by the national government to the individual states; it is left to the state to establish the only legal barrier possible between the public and the thousands who seek the authority to treat human diseases. Some states have provided efficient guaranty that practitioners given the state's endorsement have secured the essential educational qualifications. In some states, however, the responsibility has been taken up in such a happy-go-lucky manner and the legislation provided is so contrary to effective legal

procedure that the situation would be laughable, were it not the serious menace to the public. In some states laws have been passed admirable in their composition and excellent in their purpose, only to be invalidated by clauses or by other laws exempting the very persons to whom the law should apply. Invariably, the exemptions are of those unable to comply with the educational requirements of the Practice Act and against whom the people most need protection—those who have little or no medical training. Legislators have yet to learn that the art of healing is not gained by birth or inspiration, but by a rigid and prolonged course of training in the fundamentals of medicine." I believe more substantial results will be accomplished by education than by legislation.

The schools and colleges of regular medicine are becoming more and more strict in admittance requirements and the student desiring a medical education in the future must have many years of preliminary preparation. Many colleges and universities of medicine are amalgamating to facilitate thorough clinical teaching. Men of recognized ability are being employed as wholetime professors so that their entire time and talents are at the command of the student. With this advanced standardization of teaching institutions, there must follow a better equipped and more thorough physician. The standards of state boards of medical examiners (as long as there are such) ought to follow rapidly those of the schools.

The homeopathic and eclectic colleges are gradually becoming less and less in number and the student body in these institutions are materially reduced in recent years. The young man or woman of today wishing or electing to study medicine will consider very seriously the nature and standard of the school from which he or she is to receive a diploma. The regular, the homeopathic and the eclectic physicians of Florida, drug physicians, might centralize their efforts in

securing a composite board of examiners. Graduates from the three schools are taught practically along the same lines, especially as concerns the fundamental branches of medicine. Their difference of practice consists essentially in the administration of drugs—quantity and kind.

If a uniform measure can be drafted and united effort made, the physician of the state may operate under one law. The drugless practitioners may have their own laws regulating their examinations and practice. If it is possible and not feasible for the regular, homeopathic and eclectic to amicably adjust differences, the regular profession should continue their efforts to elevate their own standards, raise their ranks to the highest efficiency and educate the public to a higher sense of appreciation of their services toward the betterment of conditions and alleviation of human ills.

Previous efforts of the regular profession in procuring medical legislation has always emanated from an altruistic motive and tended toward a better service for the public. Medical legislation, as advocated by the profession, has added responsibilities to the profession and advanced the standards of higher medical education. The insufficiently educated medical man has had to prolong his studies and the immoral have had to become moral or give up practice where the laws are adequate. The medical man, more than any other, knows the inefficiency of his colleagues and he knows the sufferings of the public that follow inefficiency. He is in possession of the knowledge that will remedy the matter provided he can secure the attention of the legislator, and it behooves every true physician to exercise the privilege afforded him in his daily contact with men to acquaint them with his views and in no uncertain terms. With the profession working as a unit, zealously and earnestly, the measures in the interest of the public, which it advocates, will eventually prevail.

A PLEA FOR BETTER HEALTH OR-GANIZATIONS IN THE SMALL-ER MUNICIPALITIES OF FLORIDA.

M. E. HECK, M. D.,

Assistant to the State Health Officer,
St. Augustine, Fla.

As we cast our eyes over the history of Florida during the past quarter century, the forward strides of this great commonwealth appear nothing short of marvelous. Cities have sprung up where villages existed, swamp lands have been reclaimed, groves and farms have been developed, and railroads have been built. In all this period the Florida State Board of Health has stood as a beacon light pointing the way to better health and the prevention of disease, thus helping to make this great development possible. Education and not compulsion has ever been the policy in the fight against preventable diseases. In this way, step by step, the work of the Board has been enlarged until at the present time several well equipped bacteriological laboratories are conveniently located for the accommodation of physicians of the state; a public health exhibit is now going the rounds of the cities of Florida and literature on all public health subjects is distributed free to all who request it. Besides all this the state is divided into six sanitary districts, each of which is in charge of an Assistant to the State Health Officer. His duties consist of making investigations and inspections from time to time, helping in educational work, taking charge of outbreaks of communicable diseases, and co-operating with authorities in the various cities in his district in such manner as may from time to time be required.

It is as one of the Assistants to the State Health Officer that I have been employed for the past two years. During this time I have been assigned to the East Coast Sanitary District, comprising the counties of Duval, Clay, Putnam, St. Johns, Volusia, Brevard, St. Lucie and Palm Beach. In this long stretch of territory are nearly forty incorporated cities and towns, not to mention unincorporated villages and towns.

As previously stated, the work of the State Board of Health has been almost wholly educational up to the present time. True, state laws relating to public health matters have been passed, but these are more especially for the protection of individuals and communities against the few people who refuse to be benefited by educational measures. Through the agency of "Health Notes," weekly press bulletins and other literature, the majority of the people throughout the state have come to learn a great deal regarding disease prevention. However, I regret to say, many people do not put into practice the knowledge they possess. The fact that they do possess this knowledge is shown by their intelligent cooperation whenever, because of some infectious disease, a representative of the State Board of Health is sent to some city or smaller community. Procrastination, both on the part of individuals and city officials, has been responsible, no doubt, for many deaths from preventable disease.

In the presence of epidemics of various diseases most of the cities and towns in my district (and I believe in most cities and towns in Florida) have at some time or other attempted some form of health organization. In a few instances some attempt is made to keep the city in such condition that preventable diseases are in a large measure prevented; in others the health organization is only called into use in the presence of some epidemic; while in still others there is no health organization, not even a sanitary committee from the city council, and no health officer or city physician. In short, there is nobody in authority and no local health officer who can take charge of the situation in the presence of epidemic diseases until the arrival of a representative of the State Board of Health.

It seems almost incredible that with the advances this state has made in other fields, health conditions in the smaller cities and towns have been so much neglected, and I am afraid the burden of responsibility rests largely with the local physicians. It is only within the last few months that the majority of cities have passed the "Model Ordinance" for the reporting of births and deaths, a duty which it actually required a law to enforce upon physicians. With vital statistics as a basis, we shall be better able to keep track of the diseases from known preventable causes. As vital statistics become more and more accurately recorded (and the State-Wide Law will insure that) I feel sure that the number of deaths from preventable diseases will show the necessity for better, more uniform health organizations in all the cities and towns of Florida. The time has passed when all that is necessary is to isolate a case of typhoid fever in a screened room and disinfect the excreta. That is all very necessary, but we must go farther; we must prevent the breeding and liberation of flies; require dairies to supply us with clean milk, and have a good pure water supply.

We now have a creditable State Board of Health with full time physicians employed, our larger cities have very efficient health organizations and employ paid health officers. The next step in the scheme, to my mind, is a uniformity in health organizations in all the smaller municipalities of Florida, with health officers who are paid sufficiently so that they shall be fully recompensed for the time spent in local health work and for what practice they lose by reason of antagonizing violators of health ordinances. If some such scheme is put into operation in the various cities it will then be a comparatively easy matter to extend this health organization to the country districts and later to entire counties.

Before offering any suggestions I wish to call to your attention a few of the most

glaring of the insanitary conditions by which we of the smaller cities are surrounded.

First: Insanitary Open Surface Privies. Here flies breed in great numbers. They not only breed in the privy filth, but they feed upon it and crawl over it, and then these same flies come into our houses (and screens will not exclude them all) and alight upon our food or on the nipple of the baby's nursing bottle. Open privies, through the medium of flies, are a constant source of danger in the spreading of typhoid fever, summer diarrheas of children and through soil pollution, in the wholesale distribution of hookworm disease.

Second: Unprotected Manure Piles.

Here flies breed in countless numbers to do their part in the spread of typhoid fever, summer diarrheas of children, smallpox, diphtheria and possibly some of the other infectious diseases.

Third: No Adequate Means of Garbage Disposal.

Some cities now supply garbage wagons, but in most of the smaller towns no such system is in use—hence another fertile breeding place for flies, for even if individuals do bury their garbage in the back yards, the fly larvae already in course of development will grow to full-sized flies and crawl up through the soil.

Fourth: Ponds, Swamps, Rain Barrels, Cisterns, Cesspools, etc.

When these are not made mosquito proof—hence malaria—and we should not forget the dreadful epidemic of yellow fever in 1888. History sometimes repeats itself.

Fifth: Insanitary Dairies.

It is unnecessary for me to go into details, but conditions in practically all the dairies I have inspected in my district has been most unsatisfactory to say the least. Open privies adjacent to milking barns and bottling rooms are a common occurrence. These rooms either are not screened or else they keep as many flies inside the bottling room

as they exclude. Flies on the cows, on the pails and other utensils, on the milk, flies everywhere; and outside the dairy barn a huge mountain of manure fairly crawling with fly maggots. In view of all these dreadful conditions, is it any wonder we get dirty milk?

Taking 500,000 bacteria per cubic centimeter as a high limit, with a requirement that the milk contain no colon bacilli, how do the following milk counts appeal to you? The specimens were taken by me on the dates mentioned. The bacteriological work was done at the Jacksonville laboratory of the State Board of Health. All samples of milk were packed in ice for delivery to the laboratory.

Daytona—May 2, 1914 (dairies):

First—Approximately 1,300,000 bacteria per cc., no colon bacilli present.

Second—400,000 bacteria per c.c., colon bacilli present.

Third—6,205,000 bacteria per c.c., colon bacilli present.

Fourth—58,900,000 bacteria per c.c., colon bacilli present.

Fifth—Billions bacteria per c.c., colon bacilli present.

Sixth—Approximately 4,500,000 bacteria per c.c., no colon bacilli present.

Seventh—Approximately 1,130,000 bacteria per c.c., colon bacilli present.

Eighth—Billions bacteria per c.c., colon bacilli present.

DeLand—May 2, 1914:

First—75,000 bacteria per c.c., no colon bacilli present.

Second—600,000 bacteria per c.c., colon bacilli present.

Third—470,000 bacteria per c.c., colon bacilli present.

Fourth—Billions bacteria per c.c., colon bacilli present.

St. Augustine-March, 1915:

First—96,000 bacteria per c.c., colon bacilli present.

Second—87,000 bacteria per c.c., colon bacilli present.

Third—17,500,000 bacteria per c.c., colon bacilli present.

Fort Pierce—April, 1915:

First—900,000 bacteria per c.c., colon bacilli present.

Second—1,900,000 bacteria per c.c., colon bacilli present.

St. Augustine—May 8, 1915:

First—1,000,000 bacteria per c.c., colon bacilli present.

Second—50,000 bacteria per c.c., colon bacilli present.

Third—800,000 bacteria per c.c., no report on colon bacilli.

Fourth—1,500,000 bacteria per c.c., colon bacilli present.

Fifth—1,500,000 bacteria per c.c., colon bacilli present.

Sixth—8,800,000 bacteria per c.c., colon bacilli present.

Seventh—Did not get sample from this dairy. It is the one which in March, 1915, had a bacterial count of 17,500,000 bacteria per c.c., with B. coli present.

Gentlemen, the above milk counts speak for themselves; they are representative of the quality of milk we are getting in our smaller cities. Just how many babies these dairymen have killed cannot be determined since we have not had the benefit of vital statistics long enough to compile figures. However, a glance at the above milk scores will convince you that such milk is only fit for swine and yet we must use it and feed it to our babies because we have no better.

Sixth—Filthy Slaughter Pens:

I made the following report to Dr. Porter of an investigation made of a slaughter pen beyond the city limits of Jacksonville which will give you a general idea of conditions all over the state of Florida:

"Jacksonville, Fla., Sept. 8, 1913.

"Dr. J. Y. Porter, State Health Officer, "Jacksonville, Fla.

"Dear Doctor: In regard to my inspection of the slaughter house belonging to Mr. W. L. Graddick, located on Highway Avenue beyond the city limits in Duval county, I submit the following:

"On Wednesday afternoon, August 27th, I made an inspection of the above premises. The first things that attracted my attention were several pools of mud surrounding the building and the foul odor arising from same. The building itself is a rough board structure, the boards of which are an inch or more apart, thus permitting the free entrance of flies.

"The interior arrangements consist of two rooms, separated by a partition, and an outer shed. In the first room the animals are brought in, killed and dressed. Here the floors are uneven and dirty and the sides are covered with dirt, dried blood and grease. Higher up, about five feet from the floor, are hooks for hanging up hearts, livers, kidneys, etc., as they are taken out of the animals.

"The rafters of the building are full of spider webs and serve as an excellent place for the lodgment of dust.

"The next room contains a vat at one end where the hides are immersed in brine. The other end of this same room is very filthy, the floor being covered with mud and slime, the odor from which is much like that from a privy vault.

"The outer shed is not so bad as it is more exposed to the light and air, but even this could be improved greatly by a little cleaning up.

"The dressed meat and the various internal organs hanging on the hooks were covered with a considerable number of flies, some of which were blue ones and others of the common house variety. No screens are used at all.

"The meat is carried out and without being wrapped up is dumped into wagons for delivery to the city.

"Outside the building a number of pigs were wallowing in the mud; this mud, of which there is considerable, is formed partly by the drainage of blood and water from the slaughter house. "While I was there one of the negro laborers urinated outside the pen and then went back to handling the meat without washing his hands. As there is no privy for the use of the men they have to go into the weeds beyond the building. They probably are not very careful afterwards about washing their hands before handling the meat. While I was talking to Mr. Graddick he spit on the floor of the room where they skin and dress the meat.

"Respectfully submitted, (Signed) "M. E. Heck,

"Assistant to the State Health Officer." Seventh—Public Schools:

No school inspections are carried out in the smaller cities. Many of these schools are housed in overcrowded, poorly ventilated buildings and have most miserable toilet accommodations.

Eighth—Surface wells are not so constructed so as to prevent contamination of the water.

Ninth—Bakeries, meat shops, grocery stores, soda fountains, etc., are kept in insanitary condition.

Besides all these, other conditions arise from time to time which require strict attention. Sanitary nuisances must be suppressed so, of course, it is essential that a local health organization be established with a competent physician as a paid Health Officer with authority to act.

The following difficulties present themselves:

First—Indifference on the part of physicians. Physicians will treat case after case of preventable diseases without suggesting improvement in sanitary surroundings.

Second—Indifference on the part of city officials.

Third—The claim of lack of funds to pay a local health officer.

Fourth—Antagonism to the health officer through petty jealousies of other physicians. Fifth—Inadequate ordinances.

Sixth—Lack of knowledge of conditions of:

- (a) Milk supply.
- (b) Slaughter houses.
- (c) Privies and stables as breeding places of flies.

By way of remedy for the present state of affairs, in case the crude shoe I have made fits the particular town you represent, I would suggest the following:

First—A good ordinance creating a board of health (a sanitary committee of the council will do); creating the office of City Health Officer, defining his duties, and fixing his salary. The same ordinance should provide also for a sanitary inspector.

Second—This ordinance should include, as various sections, a regular health code for the city. For instance, one section could relate to the regulation of dairies, another to that of slaughter houses and another to privies, stables, etc.

Third—Make it the duty of the city health officers to make monthly reports both to the city council and to the State Board of Health. In this way there will be established a co-operative system between the various cities and the State Board of Health.

Fourth—Have this ordinance or system of ordinances published in pamphlet form, so that copies may be sent to violators with the violated section marked.

Fifth—Have a complete sanitary survey made of your city immediately following the appointment of a City Health Officer.

The above are only a few suggestions. Local conditions will have to govern the details, and when new points present themselves, changes can be made to suit each individual case. Gentlemen, I have addressed my paper to you as representatives of many of the cities of Florida, not so much for the purpose of making suggestions to you as for the purpose of having you pause to think of some of the things I have mentioned. You as representatives of the medi-

cal profession are largely responsible for the lives of the people in the towns where you live. In case of epidemics it is to you they look for protection and deliverance and it is up to you to recognize insanitary conditions and suggest the remedy. If there is indifference in your communities, keep talking until the people are educated up to the point where they will demand the very best in the way of public health administration.

Let the people rule—you teach them how.

SOME THOUGHTS ON SCHOOL IN-SPECTION.

D. C. Main, M. D., Welaka, Fla.

Civilization is as yet but a mere film of refinement and intelligence lightly placed upon a foundation of ignorance and superstition.

Every physician must at the present time be a missionary and expect to meet with criticism.

People look to us for restoration to, and preservation of, health, and modern medicine looks to the prevention of disease.

In the present age it is not so much what a physician is able to cure as what he is able to prevent that marks him as a benefactor.

While we are practicing medicine for a living, the work we do every day in the office and at the bedside cannot be brought to a commercial basis.

In our work as school physicians we aim to do two things—stamp out contagious diseases by finding them early and taking steps to prevent their spread, and to correct any existing condition that may be holding a child back either physically or mentally.

I want you to realize that you hold the most responsible position within the gift of man—conservators of the child's health and thus of the health of future generations.

Don't be the one to say, "I don't have

time to do the work, get someone else," but if school work is offered you at any time, do it even though the cash remuneration be small,

We go over our school children to detect eye, ear, nose and throat diseases, skin diseases, and the onset of contagious diseases in order not only to prevent further infection but also to lessen the many serious sequelae.

Let us add tuberculosis. Over 100,000 die annually from tuberculosis in the United States. To eradicate it it is necessary that the public be educated to assist in checking the spread of the germ.

The importance of attacking this problem through the agency of the public schools is indicated by the fact that ten out of every eleven of the children of this country come under the jurisdiction of the public school system for approximately seven out of the first fourteen years of their lives.

In addition to school inspection, we should instruct our teachers in the detection of the early evidences of the onset of the diseases we are looking for, and the older children should receive instruction with reference to the fundamental facts regarding tuberculosis and the more serious of the other diseases.

A close study of the etiology of the nervous diseases of childhood would enable us to prevent many cases of that protean condition, Epilepsy.

At the present time our state makes no provision for exceptional children, but it is to be hoped that the report of the recently appointed commission to look into the state's need for an institution for the feeble-minded and epileptic will be strong enough to impress the lawmakers with the fact that such an institution is needed, and this will lighten the work of the school teacher to some extent, as it will remove from her classes many who are a drag on the more intelligent pupils, though not many of these

two classes attend school for more than a short period of time.

Draw up a form of blank on stiff cardboard that will give you room in allotted spaces for the name of school, date, name of pupil, age, etc., mental status, condition of eyes, ears, nose, throat, skin, lungs and general physical appearance.

MEDICAL INSPECTION.

School

Pupil's name
Age Date of Examination
Sight. S. RL
I. No. 1. RL
Headaches
Treasures,
Parent's Sight:
Father
Mother
Hearing.
Watch, RL
Voice, RL
Catarrhal Diseases.
Skin Diseases.
Contagious Fevers.
Vaccination.
Mentality.
Doctor
Medical Inspector.

Get your county superintendent to have them printed and when you go to a school get some intelligent boy or girl to assist you in the writing and you will not find it very much of a task to gather statistics that will be of value to the school, but you will also get training that will be invaluable to yourself.

The writer knows this to be a fact, for he had at one time the initial appointment as school physician to several hundred pupils and the inspection was done monthly by order of the city Board of Education.

The blank submitted for your approval was the result of this experience and was adopted by the thirty other inspectors in the same county and by a neighboring city of some thirty thousand.

It is not claimed to be perfect, but can be changed to suit individual ideas as experience shows them to the individual.

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ONE MORE HONEST ADVERTISER.

It is with considerable pleasure that we note The Journal of the Medical Society of New Jersey has joined the ranks of honest advertising. With the September issue of their publication they eliminate all objectionable advertising matter and in the future will require that all advertising patrons comply with the standard set by the Council on Pharmacy and Chemistry of the American Medical Association. By so doing all honest advertisers are given a protection which they have a right to demand. One by one the medical journals of the country are being brought into the folds of honest advertising, thereby not only protecting their advertising patrons but also their readers. A powerful factor in this campaign in so far as the state medical journals are concerned, is the Co-operative Medical Advertising Bureau of Chicago, a bureau working under the auspices of the American Medical Association. This bureau is a valuable aid in securing advertising patronage for the state journals, in fact it was organized for the sole purpose of assisting the state medical publications. It is not a commercial advertising agency for profit, their sole requirement, which must be and is strictly lived up to, being that all publications receiving their assistance conform to the standard required by the Council on Pharmacy and Chemistry of the American Medical Association in accepting advertising copy from medical houses.

We congratulate the staff of *The Journal* of the Medical Society of New Jersey on the step they have taken and extend to the Medical Society of New Jersey our wishes for continued prosperity for both their association and their very excellent official organ.

DEFENDING THE GREAT AMERI-CAN FRAUD.

"Most of the fellows and members of the American Medical Association are aware of

the fact that the Chattanooga Medicine Company and its chief owner, John A. Patten, manufacturers of Wine of Cardui, have sued (1) the American Medical Association and the editor of THE JOURNAL for \$300,-000, (2) Dr. Oscar Dowling, president of the Louisiana State Board of Health, for \$25,000 and (3) Harper's Weekly for \$200,000. Comparatively few realize, however, that the 'patent medicine' interests of the country are spending money lavishly in a desperate effort to win a suit on whose outcome, they consider, depends the very life of the nostrum business. We have, at different times, given our readers an insight into some of the methods pursued in this case, especially in connection with the employment of detectives for the apparent purpose of manufacturing 'evidence.' The Journal of the American Medical Association calls attention to an interesting article in the current (October 2) issue of Harper's Weekly, wherein are described the activities of some of the horde of detectives employed in this case. We suggest that physicians who have the interest of the public health and the medical profession at heart buy a copy of this week's Harper's. Under the title, 'Patten in Pink Whiskers,' the story gives in detail the experience of 'Operative No. 48,' a detective who threw up his job in disgust at the work he was expected to do for the 'patent medicine' interests. How the private papers of the secretary of the Limestone County Medical Society were ransacked; how the minutes of that society were purloined and copied; how the Chattanooga pastor was dogged by detectives and private conversations taken down in shorthand by stenographers hidden from view-these are some of the things described by 'Operative No. 48' in the Harper article. Read in connection with The Journal's articles on the Wine of Cardui case, it gives a very good idea of the methods to which the 'patent medicine' interests will descend in their attempt to

discredit the medical profession and to protect their noisome brood.

Those who in the past have built up huge fortunes by swindling the sick, sense the downfall of their business that is bound to follow the publicity that has been given it by the American Medical Association and other agencies. Really the Wine of Cardui cases are not simply 'Chattanooga Medicine Company vs. The American Medical Association, Oscar Dowling and Harper's Weckly;' they are 'The Great American Fraud vs. The Medical Profession and the Public.'"

IS STRYCHNIN A "CARDIAC TONIC"?

"Clinical evidence sometimes endows drugs with diverse and unexpected properties. In some degree this seems to have been the case with strychnin. Many physicians administer this drug in cardiac emergency, although the pharmacologists have not been able to demonstrate that it increases the output of the heart. Doubtless for this reason there is a considerable degree of reserve in the textbooks of pharmacology in condemning any presumably useless practice that has been widespread. Thus, some books state that no essential increase in blood pressure follows the experimental administration of nontoxic doses of strychnin, but admit that, in pathologic conditions attended with abnormally low pressures, beneficial results may possibly follow. The alleged value of strychnin in surgical 'shock' has no experimental basis to support it and is, indeed, denied by many competent observers. It is a fact readily demonstrated on animals that cardiac muscle is not only not stimulated, but also decidedly depressed both in amplitude and in rhythm under the influence of strychnin. Greene sums up the situation," says The Journal of the American Medical Association, "when he says that the beneficial effects of strychnin on the circulatory system

which have been claimed in therapeutic practice must rest wholly on the changes in the reaction delicacy through the central nervous mechanisms. By an increase in the irritability of the cardiac inhibitory and acceleratory centers, normal stimuli may produce more profound and beneficial changes in the musculature of the cardiac apparatus. It must be remembered, however, that even this favorable response to strychnin is somewhat antagonized by the depression of the cardiac muscle tissues.

"Inasmuch as the laboratory studies of the action of strychnin show that closes permissible in one man can scarcely be of direct use in the treatment of heart disease, the use of the drug as a 'cardiac tonic' must be defended, if at all, on the basis of some indirect effect. In the series of articles on practical pharmacology in The Journal of the American Medical Association, it has been attempted in a mild way to make allowance for the undemonstrated, reputed usefulness of the drug by stating that strychnin may slow the heart through vagus stimulation at times; it may improve the circulation through its actions on the vasomotor and respiratory centers—for one cannot wholly separate the influence of the respiration and circulation—and thus through the circulatory changes it may improve the nutrition of the heart. In a similar way it causes improvement in the voluntary muscles and other tissues of the body when it improves the circulation by increasing muscular activity.

"In a review of the facts gathered by clinical observers on this subject, Newburgh quotes evidence which shows that, even though a single dose of strychnin does not benefit persons suffering from heart failure, it is not proved that the prolonged use of the drug may not be a material aid in the relief of broken cardiac compensation. At the Massachusetts General Hospital in Boston he investigated the possible effect of the administration of large

doses of strychnin over a period of several days in persons suffering from chronic heart failure. None of the patients were benefited by strychnin. The compensation was not improved in the slightest by the drug, but some of the patients subsequently recovered their compensation as the result of digitalis administration. The failure of strychnin to have its reputed effect, therefore, cannot be explained by assuming that the patients under observation were beyond all therapeutic aid. Those who improved under digitalis failed to do so during the strychnin period solely because strychnin does not improve the heart. Newburgh concludes that neither pharmacologic nor clinical evidence justifies the use of strychnin in the treatment of acute or chronic heart failure."

MEDICAL LICENSURE.

"The responsibility for the licensing of medical practitioners has been left by the government to the individual national states; it is left to the state to establish the only legal barrier possible between the public and the thousands who seek authority to treat human diseases. Some states have provided an efficient guaranty that practitioners given the state's endorsement have secured the essential educational qualifications. In some states, however, the responsibility has been taken up in such a happygo-lucky manner, and the legislation provided is so contrary to effective legal procedure, that the situation would be laughable were it not for the serious menace to the public. In some states, laws have been passed, admirable in their composition and excellent in their purpose, only to be invalidated by clauses or by other laws exempting the very persons to whom the law should apply. Invariably, the exemptions are those unable to comply with the educational requirements of the practice act and against whom the people most need protection—those who have had little or no medical training. The making of such exemptions, either by special clauses in the practice act or by laws providing special boards and lower educational standards," says *The Journal of the American Medical Association*, "is clearly perverting medical licensure, so that instead of protecting the public against the incompetent, it is providing special privileges for the incompetent, untrained men and women parading as the

apostles of some 'new and marvelous' form of healing. Legislators have yet to learn that the art of healing is not gained by birth or by inspiration, but by a rigid and prolonged course of training in the fundamentals of medicine. The only way to make medical licensure a real protection of the public is to provide one licensing board in each state with ample power to apply one educational standard alike to all practitioners of the healing art."

Cancer Department

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Consult the best authorities concerning the beginning of cancer.

Attach great importance to the potential dangers of chronic irritation.

Never wait to see what will happen to a lump in the breast.

Chronic indigestion is not a diagnosis, but a symptom-complex which requires the elimination of gastric cancer as its cause.

Early recognition is the key-note to the control of cancer.

Radical removal is the safest treatment for a doubtful growth.

Reviews from Current Literature

KELOID IN SCARS

Freeman, Leonard: The Preventive of Keloid in Scars. Annals of Surgery, 1915, Vol. LXI, p. 605.

The writer states: "The free transplantation of fascia lata has been employed recently for a variety of purposes—in operations for hernia; to close defects in the abdominal wall, the pleura, the bladder, the intestinal tract, the trachea and the larynx; in nephro and gastropexy; for elevation of the corner of the mouth in facial paralysis and of the eyelid in ptosis; for the reinforcement of suture-lines in operations upon the intestines; for closure of the pylorus in gastroenterestomy; for the repair of tendons and the formation of new ones; in the mobilization of anchylosed joints, etc.

It is well adapted for all these purposes because of its strength and non-elasticity; its remarkable tendency to heal in, even, at times, in the presence of infection; and because it does not undergo absorption, but remains unchanged within the tissues. The material is abundant and easily obtained. It may be removed from the thigh in narrow strips or in large areas, with or without closure of the resulting gap in the fascia, there being little danger of subsequent injury to the functions of the extremity."

Freeman has utilized fascia lata to prevent the return of keloid in scars, and to prevent cicatricial hypertrophy. The scar is dissected out, the skin edges are under-united, and a strip of fascia is smoothly implanted in the bottom of the incision. The edges of the facial strip are sutured to the under surface of the skin. The skin is closed.

The writer states that the method is probably not applicable to true keloid, but that unsightly, contracted, or hypertrophied scars may be relieved by the intelligent use of fascial grafts.

R. C. T.

OPEN TREATMENT IN INFECTED WOUNDS

Dyas, Frederick G.: The Open Treatment of Infected Wounds. J. A. M. A., 1915, Vol. LXIV, p. 1829.

Arguing that heat and moisture are essential to the growth and propagation of practically all pathogenic bacteria, Dyas recommends that infected wounds be exposed to the air, to aid in dehydrating the infected area, desiccate the sloughing tissues and secretions, and thus minimize germ growth and toxic absorption. He quotes the splendid results obtained in the open air treatment of burns, and applies these teachings to the treatment of infected wounds in general.

His conclusions follow:

"1. The advances made in the treatment of old suppurative wounds has not been in keeping with the advances made in other departments of surgery.

"2. The treatment of suppurating areas by voluminous dressings, either sterile or antiseptic, macerates and devitalizes the tissues, fosters the development of the pathogenic flora and does not assist in the repair of the tissue.

"3. It is always of advantage, when possible, to convert a moist into a dry type of gangrene. Therefore, the desiccating influence on the wound of the atmospheric air, in the absence of moist coverings of any sort, tends to attenuate infecting organisms.

"4. The method is safe, economical and is in keeping with nature's own processes as observed in the lower animals.

"5. The patient's period of convalescence is shortened and he absolutely suffers no pain.

"6. In my experience, both in the treatment of wounds and of burns, the danger of contamination from the atmospheric air is negligible.

"7. The addition of plenty of sunshine would be a valuable asset, but is not readily obtainable."

R. C. T.

PROSTATIC OBSTRUCTION

Tenney, Benjamin: Prostatic Obstruction Without Hypertrophy. Surg., Gyn. and Obs., 1915, Vol. XXI, p. 206.

Tenney cites sixty-four cases of prostatic malformation, either congenital or acquired, which produced urinary obstruction.

He states that "Prostatic obstruction without enlargement may be due to—

- "1. Dense layer of new-formed connective tissue below the mucous membrane and infiltrating the internal sphincter—the fibrous ring.
- "2. The same process with chronic inflammation of the submucous gland tissue—the bar.
- "3. Hypertrophy of submucous gland tissue involving the suburethral or subtrigonal groups or both—the hypertrophy in miniature.
- "4. Connective tissue replacing the glandular below the internal sphincter muscle—the fibrous prostate.
 - "5. Congenital malformation."

Of the sixty-four cases mentioned, thirteen were operated by the perineal route and forty-six through the bladder. There were unsatisfactory results in eleven, satisfactory results in forty-seven, and four deaths. Some of the operations were very difficult because of the very hard fibrous prostates. The writer recommends the use of Young's punch, the Chetwood cautery or cauterization through the bladder rather than prostatectomy in these cases.

R. C. T.

VITAL STATISTICS

Harris, Wm. J.: The Importance of Vital Statistics Legislation in the South. Southern Med. Jour., Vol. VIII, p. 833.

The only way we can remove the slander against the South of being unhealthy and having a high death rate is by accurate registration of deaths. I am folly convinced that this will prove that the South is as healthful as any part of the United States.

Life insurance companies of the North for many years charged a higher rate to policy-holders in the South, which cost the people of the South millions of dollars. This would have been saved by accurate vital statistics.

I am of the opinion that the death rate among the whites in the South, except in a few localities, is as low as in the North.

In the South most of the servants are negroes, who live in settlements, and it is important that their white employers know to what causes their deaths are due.

The South desires immigrants of the proper character from every section of the United States to aid in its industries and in its fields. The Bureau of Census is constantly receiving letters inquiring as to the sanitary conditions and rates of mortality in various parts of the South. We are obliged to advise them that, with the exception of a few cities, no death rates are available for the South.

The South is to be congratulated on the rapid strides made in recent years in the enactment of effective state laws for the registration of births and deaths.

Realizing the importance to the entire country of accurate vital statistics in the South. I have detailed employes of the Census Bureau to help these states inaugurate and perfect their systems, so as to advance the time when all the states will be admitted to the registration area. I will be glad to aid any state in every way possible in this important work.

Florida's State Board of Health in 1904 promulgated rules closely following the model law, which had the effect of law, but the rules are not enforced and no results have been obtained.

During the last year, however, the State Health Officer has been very active in having municipalities with a population of 2,000 or over in 1910, adopt a strict ordinance (drafted by the Bureau of Census), containing all the essential features of the model law, and it is his intention as soon as conditions warrant to have the model law enacted so that it will cover the entire state.

One of the most important uses of vital statistics is their practical employment for the promotion of public health and for the prevention and restriction of disease. Modern preventive medicine is based on vital statistics, and a sanitary service, whether state or municipal, which is deprived of accurate vital statistics is absolutely handicapped in its work.

Under my instruction a monograph on at least one important cause of death will be prepared each year, the publication of which will precede the regular annual mortality report. The first of these monographs will relate to cancer and will be published during 1915. The deaths from this cause will be so subdivided that statistics will be presented for thirty forms of cancer.

A monograph on tuberculosis will follow that on cancer.

CHRONIC RENAL INFECTION

Curtis, Arthur H.: Laboratory Diagnosis of Chronic Infections of the Urinary Tract in Women. Surg., Gyn., and Obst., Vol. XXI, 1915, p. 423.

Chronic infections of the urinary tract can best be diagnosed, says the author, by one who is actively engaged both in clinical work, including cystoscopy, and in laboratory study. Careful correlation of clinical findings and laboratory methods, with extensive modifications in cultural technique to meet individual cases, is essential.

The source of even small amounts of pus in the urine should be investigated; the place of its formation can be definitely localized through ureteral catheterization.

Persistent pyuria in the absence of a gross bladder lesion is almost invariably due to kidney disease.

In those frequent cases with bladder irritability which yield clear, bacteria-free urine, cultures from the traumatized urethral canals, or from introduction of a probe into Skene's ducts, may demonstrate the cause of infection. When bacteria are widely scattered or grow with difficulty, a mixture of the urinary sediments with blood, followed

by the making of a large number of ascitesbloodagar tubes of high dilution, results in conditions favorable for the development and isolation of the bacteria present.

Experience teaches that the chief lesions in urinary tuberculosis are usually renal. In obscure cases, laboratory diagnosis is facilitated by potassium iodide, tuberculin, kidney massage, limitation of liquids, repeated examinations of fresh specimens after high-power centrifugation, Petroff's cultures, and injection of a series of medium-sized guinea pigs.

There is seemingly a tendency to lay undue stress on functional urinary tests at the expense of careful routine examination.

G. R. H.

TRACHOMA

Webster, Fox L.: Trachoma and Its Treatment. Ophthalmology, Vol. XI, 1915, p. 667.

Trachoma, or granular conjunctivitis, as known in this country, is a contagious specific disease of the palpebral conjunctiva, characterized by increased thickening and vascularity, and by the formation of granular elevations of lymphoid infiltration, which undergo ulceration and subsequent cicatrization. The recent studies of Halberstadter and Prowaczek seem, however, to have led to the discovery of so-called "trachoma bodies," which are believed to occupy a position, morphologically, between bacteria and protozoa.

The disease is most frequently found in the inhabitants of barracks, asylums, almshouses and other places in which people are prone to be careless in the use of towels, handkerchiefs and similar personal articles. As already stated, it is particularly common among immigrants, especially the Armenians, Syrians and Russian Jews, but the American negro seems to be comparatively immune to the affection, while the American Indian is extremely susceptible to it.

In the early stages of the affection, if the lids be everted, the surface will be found covered with small granular bodies, which look very much like sago grains. These are either scattered or massed together (follicular trachoma), and constitute the chief feature of the clinical picture. In the latter stages, this tissue is partly absorbed, and partly converted into a dense, tendinous scar-tissue, which, by its shrinking, frequently causes deformities of the lid.

Various medicaments of an astringent nature character have long been employed in the treatment of this condition, such as nitrate of silver, copper sulphate, trichloracetic acid and orthochlorphenol (5 per cent solution). Dr. C. Montague Harston advocates solid carbon dioxid snow. In the milder forms of the disease happy results have been achieved by their continued application for a long period.

The author strongly advises the following grattage operation:

"The upper evelid is grasped along its margin by means of Darier's forceps and, the edge being turned upon itself, the lid is everted until the retrotarsal fold is brought into view. A horn spatula should be inserted beneath the lid, to protect the cornea. The exposed conjunctiva is first thoroughly scarified with the three-bladed scapel. The granular tissue is then scrubbed with a toothbrush that has been steeped in a corrosivesublimate solution (1:1000) just before being used. Immediately after scrubbing, the part is washed with a solution of the same strength. Another portion of the lid is then unrolled and the scarifying, scrubbing and washing are repeated. This process is continued until the whole palpeoral conjunctiva has been subjected to the treatment. If the lower lid is involved in the trachomatous process, it should be treated the same way.

W. S. M.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

PANTOPON (PANTOPIUM HYDROCHLORIC-UM).—A mixture of the hydrochlorides of the alkaloids of opium, containing 50 per cent of anhydrous morphine hydrochloride. It produces essentially the effects of opium, but, being devoid of opium extractives, may be used for hypodermic administration. It is probably absorbed more promptly and is free from the nauseant odor and taste of ordinary opium preparations. Pantopon (pantopium hydrochloricum) is also supplied as Pantopon (pantopium hydrochloricum) tablets 0.01 gm., Pantopon (pantopium hydrochloricum) hypodermic tablets 0.02 gm., and Pantopon (pantopium hydrochloricum) ampules 0.02 gm. The Hoffman-LaRoche Chemical Works, New York (Jour. A. M. A., Sept. 4, 1915, p. 877.)

LAROSAN, ROCHE.—Calcium caseinate. containing calcium equivalent to 2.5 per cent calcium oxide. In the treatment of diarrheas of infants a useful food is that made from the curd of milk and diluted buttermilk. The preparations of such a mixture of proper composition being difficult to prepare in a private home, Larosan, Roche, is offered as a substitute. The Hoffmann-LaRoche Chemical Works, New York City. (Jour. A. M. A., Sept. 4, 1915, p. 877.)

BETANAPHTHOL BENZOATE-MERCK. — A non-proprietary preparation of betanaphthol benzoate (see New and Nonofficial Remedies, 1915, p. 210). Merck and Co., New York. (Jour. A. M. A., Sept. 4, 1915, p. 877.)

DIPHTHERIA ANTITOXIN, GLOBULIN.—Marketed in syringes containing 2,000, 3,000, 4,000, 5,000 and 10,000 units each. Cutter Laboratory, Berkeley, Cal.

Anti-Pneumococcic Serum. — Marketed in syringes containing 10 c.c. Cutter Laboratory, Berkeley, Cal.

Publisher's Notes

CONCENTRATED ANTIDIPHTHE-RIC SERUM.

Recognizing the inconvenience and other objectionable features attending the subcutaneous administration of bulky doses of diphtheria antitoxin, some of the leading manufacturers years ago sought to isolate the antitoxin from the serum, in an endeavor to obtain a product that would represent as great a number of antitoxic units as possible in small compass. Experiments disclosed the fact that the antitoxic element in the serum is a globulin, or has such properties that it precipitates with the globulins. Various methods, all of them based upon the principle of repeated precipitation, have been employed to eliminate the non-essential portions of the serum, leaving only the globulins or antitoxin. The method employed in the laboratories of Parke, Davis & Company results in a globulin that is free from many of the albuminous substances that cause the undesirable by-effects which sometimes attend the administration of antitoxin. These proteins, which are removed in the process of concentration, are largely responsible for the toxic symptoms which

serums may produce in susceptible patients. With the concentrated serum (globulin) it is found that rashes and other undesirable symptoms occur less frequently than with untreated serum, and when they do appear they are of a milder type.

In the production of Parke, Davis & Company's diphtheria antitoxin, care is exercised that the horses selected for the purpose shall be absolutely free from disease. In pursuance of this purpose the animals are kept for several days under close observation in a detention stable. During this time thorough physical examinations are made by competent veterinary surgeons. Not only must the animals be healthy and vigorous when inoculated—they must be kept so; and they are fed, stalled, groomed and exercised with this end always in view.

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ORIGINAL ARTICLES

TONSILLECTOMY.

Comparison of the Sluder and Dissection Methods; Discussion of Hemorrhage and Choice of Anaesthetics.

> Oтіs H. Johnson, A. M., M. D., Jacksonville, Fla.

In approaching the seemingly time-worn and threadbare subject of tonsillectomy, the laryngologist is wont to offer an apology for so doing-an act which is entirely unnecessary, considering the fact that this is one of the most difficult operations in which to attain uniform success, that in this operation bad surgery is still the rule and not the exception, that at meetings of societies of throat specialists the most intense interest is always aroused by a paper upon the tonsil, and lastly that a new operation has appeared which is vastly superior to the dissection method, and which has, in a remarkably short space of time, completely revolutionized tonsil surgery, reducing tonsillectomy from a major to a minor operation.

Dissection Operation.

When, a decade since, out of the maze of incomplete and unsatisfactory methods for extirpation of enlarged and diseased tonsils, there appeared enucleation by sharp dissection, the profession accepted this as the last word in tonsil surgery, for, though it had its drawbacks, and in many cases evil results, still it accomplished the main purpose, in that it removed entirely the offending gland, a result which had been possible formerly in only a few selected cases, by any of the methods in vogue. It was, beyond doubt, a tremendous advance in this field. and both the surgeon and the laiety were quick to recognize the fact. All other methods were quickly discarded, and a perfect epidemic of tonsillectomy followed, small children being mainly the victims, the general practitioner and freshly graduated interne vying with the specialist in cutting out tonsils, whether necessary or not, provided they were large enough to be seen at all, and considering the accidental removal of part of the pillars, or the uvula, or the soft palate, with the resultant accompanying deformity, a necessary evil.

This operation is too well known to require any detailed description at this point; suffice it to say that the tonsil is seized with a pair of tenaculum forceps, pulled from its bed as far as possible, separated or cut from the anterior and posterior pillars and surrounding tissue until attached only by its base, which is then severed either by sharp instruments or wire snare. The dissection is done either by variously curved knives, sharp or blunt pointed, by cutting scissors, or by semi-blunt instruments which strive to dissect rather than to cut. Recently many surgeons have simplified the operation by introducing a pair of blunt pointed. curved scissors closed, between tonsil and pillar, then opening up the instrument and stripping away the pillar with the back or dull edge, finishing with the snare. modification, which in my opinion is far superior to any other dissection method, preserves the pillars uninjured, is rapid in its execution, and causes less hemorrhage than when cutting instruments are used to separate the tonsil from its surrounding struc-

Advantages and Disadvantages of Dissection Method.

The one paramount advantage of this

mode of tonsillectomy is that it usually removes the gland in toto, whether it be intact, or in ragged pieces, as is often the case; while, on the other hand, the disadvantages are several and important. In the first place should be considered the amount of traumatism done to the muscles by which the tonsil is surrounded; the pillars are frequently cut or lacerated, sometimes almost entirely destroyed, and the resultant retraction or scar tissue may deform the soft palate and interfere with all the functions of the throat. In one case examined by me, a fledgling surgeon, with more courage than skill or experience, had cut away almost the whole of the posterior pillars, the entire uvula, and about two-thirds of the soft palate, the swallowing powers of the throat being thereby so impaired that when the unfortunate victim drank any fluid, it regurgitated back up into the nose. At last accounts the luckless physician was being sued for twenty thousand dollars damages.

In addition to the amount of traumatism involved, the operation is complicated and made more serious by the length of time necessary, the amount of anæsthetic given, the copious hemorrhage, and added danger of shock. A case was recently reported in New Orleans in which the patient died from the anæsthetic in the second hour of the operation, and there was a discussion as to whether it was due to the amount of ether used, or to the fact that the anæsthetic was started with ethyl chlorid. The unusual length of the procedure was hardly taken into consideration.

The average duration of the dissection operation is something which is difficult even to guess at, for while an easy case may be finished in a few minutes, a submerged tonsil, for instance, may take many times as long to enucleate, and a brisk hemorrhage is going on the whole time of the dissection, requiring constant swabbing, or the use of a pump to remove the blood from the throat.

The Sluder Operation.

It remained for Greenfield Sluder, of St. Louis, to give to the world of larvngology a method for extirpation of the tonsil which is original in its conception, wonderful in its simplicity and rapidity of execution, certain in its results, and which has, in the large centers of the North, entirely superseded all former methods of tonsillectomy, dissection included. It is a matter of more than passing interest that the only instrument used in this operation is merely a modification of the old despised Mackenzie guillotine, which has been so widely condemned for clipping and beheading tonsils instead of removing them entirely; but, while the instruments are practically the same, the technique is wholly different, and the results absolutely incomparable. In the Sluder instrument the shaft is made much stronger and more rigid, the opening is oblong instead of round, the handle is larger and set at a more obtuse angle than in the old Mackenzie, and the blade must be dull.

In the Mackenzie operation the instrument was passed straight back, on the same side as the tonsil to be removed, and only that portion protruding beyond the pillars was clipped off, through the inside, or proximal, opening of the guillotine; only in rare cases was it possible to obtain even the greater portion of the tonsil, and a stump was almost invariably left in situ.

In the Sluder method, the instrument approaches the tonsil across the jaw teeth of the opposite side, at an angle of about forty-five degrees, scoops up the gland with the distal or outer side of the aperture, lifts it upward and forward and crowds it through the guillotine opening by pressing it against the prominence of the mandible just under the last jaw tooth, and then against the anterior pillar and the fingers. In Sluder's words, "The essential and only new features of this method consist (1) in dislocating the tonsil out of its soft movable bed in a direction upward and forward, to

the point where is met the eminence on the inner side of the lower jaw made by the last formed lower tooth in its socket with the gum covering it, to which I have given the name 'alveolar eminence of the mandible'; (2) in putting the tonsil through the guillotine by the eminence alone or with the aid of the finger on the anterior pillar." The operation cannot be properly done unless there is a perfect understanding of the anatomy of the parts involved, and especially of the inner surface of the mandible at its angle, and the above mentioned eminence. In fact, a clear knowledge of the latter is so essential that Sluder states the following at the head of his article upon the subject: "Let me emphasize the necessity of studying the alveolar eminence of the mandible; you cannot possibly do this work without it."

In setting the instrument the distal arc of the shaft is first passed between the posterior pillar and the tonsil at its inferior internal margin, pressed back until it touches the mandible, then the handle is rotated upward to engage the inferior portion of the gland in the ring, the entire tonsil is lifted upward and outward against the alveolar eminence, and forward against the anterior pillar; the fingers of the other hand now stuff and massage the tonsil through the opening, and when the entire circumference of the fenestrated portion of the shaft can be distinctly felt through the two folds of mucous membrane over it, the blade is thrust home, first slowly, until the operator is sure that the tissues engage properly, and then forcibly through the base of the tonsil and the edges of the two pillars. The blade being dull, the tissues are stripped back without being cut, and no damage is done the pillars or surrounding muscles. After the tonsil is cut through, it often happens that the free edges, or two plicas of the two pillars, are not severed entirely, and must be stripped off by the finger, or by a quick downward jerk of the instrument when there is but little tissue holding the instrument. If the blade be too sharp, the tissues may be cut through instead of stripped back, and the tonsil itself may be cut in two and another setting of the instrument made necessary.

Stumps of former operations, and submerged or buried tonsils are as easily removed as an average protruding one, but the operator must be careful not to misjudge their size, as the aperture should fit fairly snug over the gland. The smaller sized instrument is generally necessary for stumps, but in setting the blade over a submerged tonsil it will be frequently found that what at first seemed to be a small mass is astonishingly large when pulled out of its bed, and a larger instrument may be necessary. The beginner will do well to remember this fact, and also to bear in mind the fact that the blade must not be thrust home until the entire ring of the opening can be felt with the fingers through the mucous membrane, after pushing the tonsil through.

In Sluder's hands this method has failed to enucleate cleanly in only one in two hundred and fifty cases, though Ballenger claims that it is effective in only seventyfive per cent of cases. I, myself, am inclined to believe that it is perfectly successful in practically all children, and in ninety per cent of adults. In a small per cent of cases previous inflammation has left a peritonsillar infiltration which complicates the operation and sometimes may prevent it entirely, but in many the Sluder operation may be used successfully, in spite of adhesions. Sluder himself says that he employs his method "for all tonsils, under all circumstances, with any anæsthetic or without one" and has had perfect results in over ninety-nine and a half per cent. It does indeed seem to solve definitely and conclusively the tonsil problem, and the quicker the dissection method is discarded for the Sluder, the better for all parties concerned. It enucleates the tonsil absolutely intact, in capsule, as is shown by a collection of tonsils which I removed by this mode, with no damage to the pillars, less hemorrhage than in any other method, less anæsthetic, and in less time. Thirty seconds is long enough for removing a pair of tonsils, and Sluder says they should be easily taken out in eight or ten seconds each.

The patient recovers much more rapidly after the Sluder, as there is less traumatism, less anæsthetic, and less shock, and there is no danger of resultant deformity of the pillars or palate, and interference with the voice or other functions of the throat. Children complain of little or no soreness or pain after the operation, and the period of depression is remarkably short as compared with any other method.

Hemorrhage.

This rarely persists to the danger point after a tonsillectomy, and is usually easily controlled. When using a general anæsthetic, after the procedure is over, ice water poured over the angle of the jaw, or ice packs in the same region, will materially quicken coagulation; if, after this, hemorrhage continues, firm pressure in the wound, especially at the base of the pillars, will nearly always immediately accomplish control.

In using upon adults a local anæsthetic for the operation, subsequent nervousness is likely to cause an annoying bleeding, on account of rapid cardiac action from fright or action of the drug, and to counteract this it is wise to administer a hypodermic of morphia and atropia twenty or thirty minutes before beginning; this both calms the apprehension of the patient, lessens pain, and prevents intermediate hemorrhage. It is useless to apply styptics or pressure to control a hemorrhage which begins an hour or so after the operation, as long as the pulse remains at a hundred and forty or fifty, due to nervousness and the systemic effect of cocaine or some kindred drug; morphia, hypodermically, will generally stop it without recourse to any other remedy. Anaesthesia.

The anæsthetic used is usually the same in both dissection and Sluder methods, but the latter, on account of its short duration, lends itself admirably to such evanescent anæsthetics as gas or sonnioforme, the effects of which last fully long enough to take out both tonsils, when of average character. Of the two, somnoforme is probably preferable, on account of the engorgement of the blood vessels of the head by gas, and is said to be as safe as gas.

As to the comparative merits of ether and chloroform, the former is better in adults, but in the case of children, chloroform may be preferable, provided it be administered by an expert anæsthetist with a wide experience in its use. Children react much better from chloroform, require less of it, and exhibit less depression and systemic disturbance afterward. As a general rule, however, and certainly in the hands of the average anæsthetist, ether, preceded by gas, is the safest and best, in spite of the profuse secretion it causes in the throat, the longer duration of the anæsthesia, and subsequent depression.

In using a local anæsthetic, a one per cent solution of alypin or novocaine injected hypodermically after an external application of ten per cent cocaine, is safer and usually as effective as a hypodermic of cocaine, which is quite dangerous used in this manner. The Sluder method may be used successfully with a local anæsthetic in adults, but seldom thus in children.

SOME OBSERVATIONS OF PRE-SF NILITY OF THE EYES AND THE EFFECTS OF LIGHT UPON THE EYES IN THIS LATITUDE.

Frederick J. Walter, M. D., Daytona, Fla.

After personal observation of numbers of eve examinations for various troubles in

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

the North and South, the writer has noticed certain conditions more prevalent in one or the other section. While in Florida we do not have symptoms from snow-blindness, we do have niphotyphlosis, or snow-blindness produced by the reflection of the sun on the white sands either on the highway or the bright beaches. It is the purpose of this paper to mention niphotyphlosis, early presbyopia, pre-senile intrinsic ocular changes and to refer to a mild grade of granular conjunctivitis.

Patients come to us with sensitive and irritable eyes with no particular symtoms other than aching, soreness in the orbits, and squinting the brows and lids, with a history of being out-of-doors considerably. Upon closer examination we may find a refractive error, the correction of which does not allay the distress. The opthalmoscope does not always show disturbances of the retina, vet there is frequently a choroidal hyperemia in the macular region. This is a mild Solar Retinitis and when advanced the changes are described by De Schweinitz as showing a maroon-colored area with a central gray patch, and numerous faintly marked vellowish-white dots. It occurs after looking directly at the sun and in electric welders from the intense electric lights used. The glare and dazzle of our highways may produce a modified condition similar to this with retinitis and conjunctivitis (complicated by dust and wind) similar to the fundus and conjunctivital changes in snow-blindness.

When this pathological change of the fundus actually takes place the prognosis is not good. The scotoma is permanent and the degeneration of the papillo-macular bundle has occurred. However, if these changes are not to be found, the prognosis is better and the treatment the same as for a retino-choroiditis is indicated. The use of colored glass is of prime importance and the selection of the proper color and tint is of equal importance. Amber and smoked

lenses make the world look gloomy and many clinicians are resorting entirely to the amethyst tints, the degree depending upon the amount of irritation and the occupation of the patient. Too prolonged use of darkcolored lenses is undesirable from many standpoints. However, from observation the writer is convinced that in this bright part of the world with fully three hundred days of sunshine in the year, we are not making free enough use of colored lenses. In cases exposed to the reflection of our bright highways we should advise the use of light tinted lenses quite generally, the amethyst and "Noviol" preferred with the patient's correction if there is a refractive error ground into the lense.

A most noticeable difference here in Florida is the early appearance of presbyopia. This may at first seem to be a broad statement. When we reflect for a moment we all know that puberty occurs at an earlier age in warmer climates as does the menopause. A man looks older at fifty in the South than his brother at the same age in northern latitudes. Senile changes do take place in accordance with this. From my case records here I find presbyopia from three to five years earlier than in the records I have made in the North with about the same number of patients.

In other words, patients here need lenses for reading earlier here than in Philadelphia. In harmony with other muscles the eyes tire more easily and do not withstand prolonged strain in continued warm weather so well as in cooler weather. These pre-senile changes are observed frequently in the native population who show many cases of senile arc-hardening and deposits in the lenses, changes in the vessels and early cataract. India is the brightest country under the sun. The houses have very small windows to tone down the light. India has a great deal of cataract. The nearer we approach the equator the more the prevalence of cataract. It cannot be due to mal-nutrition alone; surely the light may be a factor. It looks as though nature were trying to draw a veil and protect the sensitive retina. In consequence I have prescribed tinted lenses in some of my cataract cases and I think with good results. It would be very hard to say that anything definite has been learned, but in a few cases it was evident the cataract did not progress with the same rapidity afterwards. The tinted lenses allow the pupils to dilate and let in more rays and many times better vision results.

In my practice in Florida I have found true advanced trachoma rather rare, but I have found in school children much "schoolfolliculosis." Much difference of opinion exists as to whether folliculosis should be placed in a separate category from granular conjunctivitis, or whether it should be regarded as an early stage of the latter disease. Clinical evidence seems to warrant that it is distinct, for it does not leave scars and responds to treatment better. Histologically there is no decisive difference between fresh follicles and fresh trachoma bodies. With the correction of the refraction, avoidance of dust, such drugs as the silver salts, copper and boroglycerid of tannin, these cases have progressed so favorably for me that it seemed wise to mention it in this connection.

THE PROGRESS OF INTRA-NASAL SURGERY.*

L. C. INGRAM, M. D., DeLand, Fla.

I feel certain that intra-nasal surgery at the present offers us the means of securing as perfect results in a curative way, for diseases in the nose, as can be claimed for improvement in any other special or general surgery. New operations have taken the place of some older methods for relief of certain intra-nasal troubles, and other

operations have been changed to conform to our change in view of the trouble. This has been due mainly to a recognition of the inaccurate and faulty older classification of diseases of the nose, throat, and accessory sinuses and the formation of a more rational classification in harmony with the pathology taught. The general conception in the past, in all diseases of the nose, was to call them catarrh, and our experience generally now is that the greater number of patients in describing their trouble still speak of it as catarrh. Some physicians have the habit when examining the nose to always announce to the patient that the trouble is catarrh. Whether this diagnosis is to satisfy the wishes of the patient or is the firm conviction of the physician I am not prepared to say. The fact is, the term is too often used to indicate any and all mal conditions of the nose.

Our conception of the cause and effect of some of these mal conditions in the nose have materially changed in recent years. We no longer look upon the sinusitis or abscess as the causative factor in inflammatory conditions of the nose but as secondary to some deformity of the parts that interfered with function. Frequent colds, etc., associated with defects or deformities of some of the parts that interfere with the proper ventilation and drainage of the nose prepare the way for abscess formation in the accessory cavities. When this stage has been reached there are created other symptoms complex, in other organs, and are as a rule the deciding factors for the patient to seek medical aid. It has been through the effort to relieve these patients and conserve the function of important nasal organs that brought about the perfected modern intra-nasal surgery. Each year there has developed a greater tendency in surgery of the nose to deal with the organ at fault and correct it, to secure ample breathing room, aeration and drainage. In fact, the foundation of modern intra-nasal surgery

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seeks to conserve organs, correct deformities and secure function. There are three operations which I desire to discuss briefly, that do very much to make good this special surgery. They are the sub-mucous resection of the septum, crushing and straightening of the turbinates and sub-mucous opening for drainage of the maxillary sinus.

There are a few deformities of the septum, their variations are many, which seriously interfere with aeration and drainage of the nose; we speak of them as crooked septum, displaced septum, spurs, etc. It is only within recent years that a uniform and satisfactory method has been used to deal with these deformities of the septum. namely the sub-mucous resection of the septum. The older method of sawing or chiseling away the spurs and ridges fracturing and attempt at replacement of deflected septum, or, what was the worst of all, cutting out abnormal turbinates in the effort to get more space have been replaced in most instances by the more uniform and much superior sub-mucous resection. The operation must be governed, it is true, by the deformity to be corrected, and for that reason there is little difference in the methods for doing the work. The profession readily accepted this operation and there exists today a uniformity of operation, though at first different men attempted to individualize certain phases of the operation. People with crooked septum who do not have any trouble that can be attributed to the deformity are not uncommon, while we do know of many patients with this deformity and other conditions being favorable resulted very seriously. these patients a careful sub-mucous resection of the septum has given some very remarkable results. Really there is no operation in general surgery that produces any more striking results than is secured in many of these patients.

For the past three years I have practiced a method of dealing with hypertrophied or

displaced turbinates with the same object of conserving as nearly as possible functionating tissue. It is known as the crushing method and consists in crushing the turgescent border and if necessary fracture and displace into a normal position. With a normal septum and an enlarged or deformed turbinate it is the turbinate that must be dealt with. I know there is a difference of opinion as to what is best to do with the turbinate, but it is very noticeable that the sentiment gaining each year is to conserve as nearly all of these organs as is possible. Too many very serious after-effects have arisen in the past following turbinectomy that cause us now to hesitate before removing one or both of these organs. I first saw Dr. Andrews, of Chicago, using this method to reduce the size of the turbinates and secure space for the proper ventilation of the nose. Having used the method in a number of cases, ranging in age from four years to seventy years and having secured uniform and very satisfactory results, I am more than enthusiastic in support of the operation. I have many times explained the operation to different physicians after seeing them do the more radical one and asked them to try it and see the results. Some have reported to me very favorable results of their experience.

The operation is done as follows: Anæsthetize by placing flattened pledgets of cotton saturated with 4 per cent cocaine upon the turbinate for five to ten minutes, remove and apply the powdered cocaine especially beneath and posterially where not easily reached with the small packs. With a nasal dressing forcep begin at the anterior edge and by successive bites crush the tissue the entire length. If the turbinate is too near the septum fracture and place to the outer wall. By the second day the swelling is generally at its height. The patient uses an alkaline wash several times a day to cleanse the nose and once a day I shrink the tissue with adrenalin and wash. At the

end of the week the swelling is mostly gone and from this time atrophy takes place, so that in one month and often earlier the nose is working normally and without obstruction. There is no hemorrhage as a rule that has to be looked after and no packing to be put in the nose. In hay fever and many other cases of a turgescence this operation has given some very gratifying results.

The sub-mucous opening of the maxillary sinus for the purpose of drainage and irrigation was first demonstrated to me by Dr. Todd, of Minneapolis, Minn. It gives all the advantage that is gained by the nasal over the canine opening with the added advantage of being more accessible and interfering less with the inflamed turbinate. The patient or the nurse can very easily irrigate the sinus but if the physician does the irrigating it is very convenient for him and gives less pain to the patient.

The operation is performed as follows: Anæsthetize with cocaine as for crushing. An incision is made through the mucous membrane and periosteum at the angle on the superior maxillary bone where inferior fossa meets the facial surface. The tissues are elevated and the ridge exposed. This ridge is grasped with a forcep and crushed, fracturing the inner surface. The fragment elevated, then removed with a forcep. A biting forcep is then slipped into the opening and the opening enlarged as needed, cutting away the thin partition. The opening here is more accessible and has given me better results than the other methods.

THE MOTOR NERVES AND THEIR IMPORTANCE IN AFFECTIONS OF THE EYE.*

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In the management of the eye, the importance of the motor nerves in their rela-

tion to the eye is frequently overlooked. It is not my intention in this paper to take up the action of the motor nerves in general, but to dwell briefly on those nerves which supply the eyeball, which are largely from the ophthalmic or ciliary ganglion, a small body situated in the posterior part of the orbit. It receives motor fibres from a branch of the motor oculi, a sensory branch from the ophthalmic division of the fifth nerve, and fibres from the cavernous plexus of the sympathetic. The ciliary nerves, which proceed from the anterior body, endow the structures of the eveball with sensation and motion. The motor oculi, the pathetic and the abducens, viz., third, fourth and sixth nerves, jointly are responsible for the motion of the muscles of the orbit, the four rectii, superior and inferior oblique, and the levator palpebrarum. The facial nerve, while not an eveball nerve, should not be overlooked as it sends a branch to the orbicularis muscle which closes the eve. The most important nerve of the eve is the third nerve. It supplies all but two of the muscles of the globe; it sends filaments to the iris and other muscular fibres within the eve, and besides all this it opens the eye by elevating the upper lid. A good illustration of reflex action is demonstrated by the third nerve by its normal motor power upon the iris by causing contraction of the pupil, the stimulus of light falling upon the retina and through it exciting that portion from which the third nerve takes its origin. This nerve exerts a double influence in relation to vision. It mainly controls the movements of the eyeball and the upper lid; secondly, the amount of light that can enter the pupil, and probably takes part in the adjusting power of the eve to various distances. A good result can be obtained if treatment is not delayed too long in the majority of nerve affections. Of course the prognosis depends entirely upon the case under consideration, or I should say observation.

Two exceedingly interesting cases requir-

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ing much care and attention I have had to deal with during the past eighteen months. The disease I eventually diagnosed as diffuse chlonic facial spasm. Both patients were men past middle age, one a retired merchant and the other a promoter. Their histories are as follows:

In one the patient had a severe cold the previous winter and was confined to his room three weeks, part of the time in bed. The cold had settled entirely in his head, which he said was swollen nearly twice its size and looked as if he had been in a fight. He noticed during the attack his left evelid drooped and he could not see quite as well as formerly out of that eye, but thought it would pass away shortly. He was extremely nervous and irritable and occasionally had muscular twitchings of his face, especially noticeable on the left side. When able to be out, his physician ordered him a trip south by water to recuperate. He came to Jacksonville and shortly after was referred to me for an examination of his eves.

Case 2, in the fall of 1913, was thrown from his horse while riding. He sustained painful but not serious injuries. He was confined to his house ten days, his body was bruised, face and back scratched and lacerated, wound on left side of head necessitating several stitches. When able to return to his office he found he could not keep his left eve open when using same in perusing his mail. He also experienced difficulty in moving his head. There was no pain except in trying to rotate the head. There was considerable improvement of the muscles of the head by the use of electricity and massage, but the left evelid did not improve. He observed the pupil of that eye was smaller than that of the other eve. He eventually consulted an eve specialist who recommended an operation, stating the complaint was ptosis, the result of injury. The patient refused operation, decided to postpone it until after his return from a business trip to Florida. While here he had an attack of tonsillitis and I was sent for. While under my care I learned the history of his eye and had an opportunity to closely observe same, eventually diagnosing the trouble as chlonic facial spasm; the twitchings of the face were occasional, sometimes the interval between the spasms would be of longer or shorter duration.

On examination of the eyes of Case 1, I found he was myopic. He accepted a minus 1.25 D S for both eves for near vision. It was necessary to keep the lids of the left eve open with a speculum while making examination. The correction for distance was minus 2.25 D S, both eves; the eves were about the same in size, the pupil of the left eve was smaller than its fellow. On both patients I used the galvanic current, at first for two minutes at a time twice a day for three days, one pole behind and below the left ear, while with the negative sponge electrode moistened applied over the closed lid of the affected eve; internally I gave one-sixtieth gr. strychnia sulph. three times daily. On the fourth day applied one pole over the supra orbital nerve, the other behind the ear on left side moving over face and neck. I did this for three minutes twice daily for ten days on one, and for twelve days on the other patient. I was pleased to notice after the three-days' treatment with the galvanic current there was a steady improvement, the interval between the spasms becoming longer. The urines of both patients were highly acid. In one albumen was found, which was not permanent. The blood pressure of both men was high and remained so up to my last seeing them. Weight of one was 195 pounds, the other 213. The height of both was 5 feet, 11 inches. The affected eye in each case was the left and the drooping lid on their departure was able to be opened about twothirds its normal, which was most gratifying to the patients and myself as well.

I would add the eyes of the patients felt

relief with use of a tinted lense. Amber seemed to be the preferable color. It was claimed the eyes felt weak when exposed to a bright light. Recently I received a letter from Case 2. He says he is ten pounds heavier than when here; he seldom has a spasm, the last one was over three weeks prior and then it was slight, his left eyelid opens about normal, same as the good eye, he still uses the tinted glasses when out of doors during the day, he takes electric baths and massage once every week.

I have gone somewhat into detail regarding the above cases. They were both under my care at the same time and it gave me an opportunity to watch the treatment and result of these, to me, unusual as well as most interesting nerve cases. This condition occurs more often in males than females, and is more common in older than young people. Sometimes it is the direct result of injury to the facial nerve, and sometimes a reflex condition the result of a disturbance in other nerve tracts. Heredity plays an etiological part many times, but this class of nerve disorder usually reaches the nerve specialist, as should all neurotics and neurasthenics, for they require more thorough investigation and care than the general practitioner can devote to them. The mental and physical condition is most important in the improvement of these cases, but the will power, while largely contributing to the control of these spasms, will not of itself do so, as sometimes there may be from one to a great many attacks within twenty-four hours. Worry and excitement of any kind aggravate these spasms and sometimes other groups of muscles are involved in these obstinate cases. Frequently during a spasm there are noises rumbling, crackling, and even pain in the ears. There are points which correspond to individual sensory nerves, they are very sensitive to pressure, the latter may suddenly abolish, more rarely intensify the spasmodic attack; they may be found along the supra, or infra-orbital nerve, on the mucus membrane of the nose or mouth, and various other places on the body. The convulsions are usually unattended with pain, but the patient usually complains of a tired, exhaustive feeling in the muscles affected. In some instances this disease has gone on for months, years, or for an entire life time. Prognosis is uncertain, but the disease is never dangerous to life. The treatment in general largely depends upon the patient, and how long the individual has been afflicted, the severity of the attacks, etc. The cases herein reported were presumably the result of a reflex condition, while on the other hand we may have cases resulting from some nerve condition direct where the physical condition or mentality is not up to the normal, or below par, so to speak.

Mutual Life Building.

TUBERCULOSIS — A DISEASE OF DOUBLE ORIGIN.*

HIRAM BYRD, M. D.,

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In 1907 Dr. Ennis was operating a tuberculosis camp near Narcoossee. At that time I saw one of the patients with him—a youth from South Carolina—who was far advanced with tuberculosis, but who also showed evidence of hookworm disease. I made a microscopical examination and found, as suspected, that he was a hookworm sufferer. Appropriate treatment was carried out and he was soon relieved of his hookworms, and then made an unusually rapid recovery from tuberculosis.

Among our hospital records is the case of a man who was admitted for tuberculosis, but who also had malarial parasites. He was given quinine hypodermically till his malarial parasites disappeared, and then he gained just a pound a day till he reached 167, when he was dismissed.

Another upon admission gave a history

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of having had tuberculosis several years ago, and syphilis at the same time. He was placed upon appropriate treatment for syphilis, from which he recovered, and then recovered also from tuberculosis. After several years of good health his tuberculosis symptoms reappeared, and he was admitted to the hospital far advanced. There was no visible evidence of syphilis at this time but he gave a luetin reaction. He was placed upon antisyphilitic treatment, and gained weight for awhile, but finally succumbed.

Another case, in private practice this, developed a sore spot in the lower lobe of the left lung, followed by a dry fruitless cough, anomalous temperature, night sweats, emaciation—in fine he had all the symptoms of tuberculosis including the VonPirquet reaction. His first wife had died of tuberculosis some twelve years previously. careful clinical study elicited the fact that he was a sufferer from intestinal putrefaction, to which attention was at once directed, and which was soon relieved. That done his tuberculosis symptoms all subsided, he regained all he had lost in weight, and a few pounds extra, and has been in good health ever since, now several months.

Sheffield, England, is one of the cutlery centers of the world. Long before Koch discovered the tubercle bacillus, it was observed in Sheffield that grinders of cutlery sustained a very high death rate from what was known as "grinders' disease," but which is now known to be tuberculosis.

It has recently been pointed out that if a given number of persons that have tuber-culosis and a similar number of persons that are non-tubercular be taken at random, it will be observed that a greater number of typhoid histories will be found among the tubercular.

Now it is generally accepted that the tubercle bacillus is ubiquitous—that few or none escape ingestion and inhalation of virulent tubercle bacilli sooner or later. It

is further generally accepted, hence needs no re-enforcement here, that very few people escape a tubercular focus sometime in life, that most people get well with no knowledge of having had such a focus.

It is easy to understand why everybody, or nearly everybody becomes infected sooner or later—the wellnigh universal distribution of the tubercle bacillus thoroughly explains that. But why should most people get well in the preconscious stage of the disease? Why should another group advance to the conscious stage of it and then recover? These two groups include, roughly, 90 per cent of the entire people. Then why should the other 10 per cent not recover? The answer which we have had to take for want of a better is that it is a matter of "vital resistance," whatever that is.

Dr. Knopf has recently recommended that all persons have their family physician go over their lungs every few months looking for tuberculosis. A paper was recently read before the British Medical Association in which the position was taken that it would be the function of the family physician in future to examine his patients every few months in order to detect any obscure disease that might be established, or the onset of the graver maladies during their incipient and obscure stages—just as the dentist examines the teeth every few months looking for unsuspected decay.

Osler says that a great majority of cases of acute tuberculosis are cases of auto-infection, arising from a pre-existing tubercular focus which may be latent and unsuspected. After measles and whooping cough, and especially after pneumonia, people are liable to light up with tuberculosis.

Now putting together nothing but generally accepted facts, but putting them together in a new way, note where we land. First that practically all people pass through the pre-conscious stage of tuberculosis. And that doesn't mean all people who sooner or later show the disease—it means you and

me. Second, that after certain acute infections as measles, whooping cough, pneumonia, and after such prolonged fevers as typhoid, and malaria, those latent foci are especially prone to light up into what we know as incipient tuberculosis, and that with an attack of cold or the grippe, or some other inter-current malady, these incipient cases advance to "third base" or advanced tuberculosis. Third, that certain cases recover as soon as the accompanying malady is relieved.

Now with all these facts before us, how can we escape the conviction that the tubercle bacillus is only half the cause of tuberculosis? That it is essentially dependent upon some intercurrent malady, and not upon the tubercle bacillus alone; that what we call vital resistance is largely a matter of intercurrent disease; that such disease enables the ubiquitous germ to get its first anchorage, thus leading to the first, or preconscious stage of tuberculosis; that a subsequent attack of intercurrent disease, or the same attack for that matter, if it be sufficiently prolonged, or sufficiently severe, escorts the germ to "second base" where a diagnosis is possible, and which we now refer to as inicipient; that after a certain stage is reached tuberculosis sets up a vicious circuit wherein it acts both in its own capacity and in the capacity of the accompanying malady; that with our advancing knowledge and refinement in diagnosis more and more cases will be attributed to their proper cause, and fewer and fewer charged to "weak constitution," which after all is only a threadbare cloak for ignorance; that heredity and alcoholism and excesses will continue to play their part, but they will play as individual actors, and not as whole troops.

Once tuberculosis is recognized as a disease of double origin the accompanying malady will be sought with far greater assiduity than the tubercle bacillus. When it is accepted that most people have the

tubercle bacillus anyway, the finding of the tubercle bacillus will not be used so much as a diagnostic test as it now is—it will be used chiefly to determine whether the case in hand has advanced from the pre-conscious to the conscious stage whether it is an open or closed case. When it is accepted that most people have the tubercle bacillus and that some accompanying malady is needed to activate it, people will realize as never before that common more or less innocent diseases may be fraught with the gravest consequences, then these common innocent diseases will not be taken so lightly; and when it is accepted that the way to control the tubercle bacillus is to eliminate the accompanying malady, then emphasis will be shifted to the good of the patient and the glory of medicine in both diagnosis and treatment, from the impregnable germ to the thing that makes its activities possible.

RARE AND INCOMPLETE FORMS OF EPILEPSY.

WILLIAM P. SPRATLING, M. D.,

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Welaka, Fla.

There are several "bizarre," incomplete, and uncommon forms of epilepsy that are not only wholly unknown to the general practitioner, but with which the neurologists usually have scant working knowledge, since this can only be acquired through the actual study of thousands of cases gathered together in special institutions.

The usual conception by the general practitioner of an epileptic seizure is: an initial cry, a violent fall, tonic—then clonic general muscular contractions involving the whole body, biting the tongue and expulsion of bloody froth, terminating in a more or less prolonged period of post convulsive coma

or heavy sleep. These manifestations, however, constitute only a part of the clinical picture of a truly classical fit, of only one type, while there are many other types to which the above partial description does not at all apply. These variant forms will be briefly considered in this paper.

The first of the unusual forms I shall take up, and which is also one of the rarest and perhaps the most swiftly fatal of them all, is the so-called "Tetanoid or Tetanic Epilepsy." This type of the disease has one paramount feature that must never be missing, therefore the pathologic lesion underlying its origin is fixed and invariable in character.

In the accounts of Tetanoid Epilepsy found by the review of much literature, and the five cases occurring in a grand total of more than five thousand and five hundred of all the epilepsies that have come under my personal observation during the past twenty-five years, the one paramount feature referred to above consists of a single, rapid, shock-like tonic contraction of the voluntary muscles of the entire body, that grips the patient hard and fast in whatever posture the body may be at the time of the onset of the seizure, holding it rigidly immobile for a period of time varying from a few seconds to several minutes, and some times to a fatal issue.

The very fact that Tetanoid Epilepsy so often proves fatal as the result of a single seizure shows how rigidly locked up are the muscles of respiration for a length of time sufficient to produce asphyxiation—two of the five patients (40 per cent) I had the opportunity to study died from a single convulsion.

Tetanoid Epilepsy is more fatal than Status Epilepticus, in which the death rate is 25 per cent. Of the two Tetanoid cases in which death occurred, one was a boy of eight years, the son of a physician, who frankly admitted himself to have been the victim of a luetic infection three years before

the boy's birth. The boy had "Hutchinson's teeth" well marked, but bore no other evidence, externally, of inherited syphilis. He was well developed, vigorous and active, but of rather inferior mentality. On his first visit to my office he had a seizure. Standing near his mother, he suddenly made a low inarticulate cry, moved his feet wide apart, threw out his hands to catch his mother's dress for support which he grasped firmly. His mouth opened, lower jaw protruded, saliva escaping. Eves set staring and wholly insensitive to light and touch, pupils slightly dilated. Skeletal muscles all rigid, even to those of facial expression, as a marble statue for one and three-quarter minutes, when his arms began to relax gradually and his legs to give way at the knees. Simultaneously with these relaxations he began to regain consciousness, and in five minutes was in his normal condition, except for soreness all over and a severe frontal headache. He died in a similar attack a few months later.

The second case was that of a woman of thirty-seven, epileptic from her eighteenth year. She died standing upright in the act of drawing water from a faucet. One hand rested on the marble basin, her feet apart. She was sought for by her attendant after being absent five or six minutes. The body was still rigid when laid on the floor. She had previously suffered from grand-mal attacks only. It is a well-known fact, however, that the type of epilepsy in any case may suddenly change completely. Today it may be grand-mal and tomorrow petit-mal. The type least likely to change in character is that known as "Jacksonian." Here the fit is confined to groups of muscles, the localized area in the brain in which the explosive discharge occurs does not seem to extend so as to involve surrounding areas of brain tissue. The reason for this, in my opinion, is that the affected tissue is on the surface of the cortex, and not deep enough to greatly influence other sections of the brain.

The pathogenesis of Tetanoid Epilepsy is, in my judgment, not different from that of other grand-mal types, but is simply more intensive, more profound than is the case with other types.

The initial convulsive discharge being greater, the resulting effect in the way of a more intensive and lasting muscular contraction follows as a matter of pathologic necessity. This prolongation of the tonic period of the fit places life in jeopardy or destroys it by asphyxiation.

The treatment of Tetanoid Epilepsy differs in no wise from the treatment of the disease in general. It is clear that any treatment likely to be at all effective must be carried on in the inter-paroxysmal period, for treatment of the fit itself is as ineffective as it is unwise; that is to say, were it possible to institute any form of treatment or to resort to any expedient with a view to cutting short the fit it would serve only to postpone what is sure to happen later, for the fit is almost sure to be repeated, and the later result is nearly almost always more severe than the first when the first is temporarily suppressed or set aside.

Myoclonus or Myoclonic Epilepsy was first described by Unverricht in 1891 under the name of "Family Myoclonus." It is an associative disease of a rare type. Its clinical manifestations consist of paroxysmal, asynchronous, bilateral, lightning-like contractions of the trunk muscles, and of the proximal muscles of the extremities, separated by intervals of entire freedom from such movements, and accompanied by a more or less persistent grand-mal type of Epilepsy. (From the author's "Epilepsy and Its Treatment," p. 191.)

In truth the chief symptom of this rare form of the disease may be said to be the very antithesis of Tetanoid Epilepsy, for here there is a series of sharp shock-like contractions, while in the latter there is a single prolonged and intensely rigid contraction.

Clark and Prout studied very carefully fifty-seven cases of this kind that occurred among the 2,000 or more epeliptics admitted to the New York Colony for Epileptics during the time that I was medical superintendent there; and since then numerous additional cases have been reported by Sepilli, Tundburg, Shanahan and others. It is undoubtedly true that Myoclonic Epilepsy is not so rare as it is unrecognized, cases of multiple tic and such like affections being liable to be confused with it. Early adolescence is the life period of its greatest frequency; just as it is in most cases of the various forms of the more easily recognized types by which it is very frequently preceded.

The prognosis for recovery is bad. Few live beyond the fortieth or fiftieth year. As to pathology:—Autopsies in several cases failed to show any changes sufficiently gross to have produced the symptoms encountered, but it is quite certain that it is not dependent on primary lesions in the muscles or nerve trunks, though these may show secondary degeneration. Raymond, Ribot, Clark, Prout, Dide, and others agree in believing the lesion is cortical and due to a faulty chemataxis of the cortical cells probably brought about because of inherent structural defect, the cell being undersized, poorly insulated, or otherwise defective.

The treatment of Myoclonic Epilepsy, like that of Tetanoid, does not differ essentially from the treatment of the ordinary form of grand or petit-mal. There is little or nothing to be done in the way of treatment during the fit itself. It is during the inter-paroxysmal period to which we must address our efforts, then too we must remember that Myoclonus is an associative disease, that we must treat two diseases in one.

Partial or Jacksonian Epilepsy is a convulsive disease which is in reality not a true epilepsy at all but a monospasm, which is a spasmodic contraction confined to a

single group of muscles, like those of the lcg or one arm, or on one side of the face. This was first described by Prichard in 1822 and next by Beavais in 1827 and still later on in 1831 by Elliott under the term Partial Epilepsy.

Voison and Féré, the distinguished French students of epilepsy, exhaustively studied it under the term Partial Epilepsy. It remained, however, for that incomparable student of epilepsy, Hughlings-Jackson, of England, to give it in 1867 the most exhaustive and minute study of any investigator up to that time; so it was that it came to bear his name.

The chief thing for the student of epilepsy to guard against is the likelihood of confusing incomplete forms of the disease with the Jacksonian form. An ordinary grand-mal fit may, in its partial expressions at times, and for reasons we do not understand, exhibit the same localized spasm that alone constitutes the true Jacksonian fit in its completeness.

The causes of Jacksonian Epilepsy are numerous, and may be entirely local, including such as acute or chronic meningitis, luetic infection, uræmic poisoning, exaggerated emotional disturbance, alcoholism, and trauma of the brain, injuries to the peripheral nerves, old cicatrices and various forms of visceral irritation.

Jacksonian Epilepsy is devoid of nearly all the classical manifestations of an ordinary grand-mal fit. The only sign of an oncoming attack, and that by no means constant, is a feeling of numbness or tingling in the fingers of a hand; coincident with this there may be a formication on the back of the hand. Consciousness in true Jacksonian Epilepsy is never lost, indeed it is but rarely impaired. I have seen a number of such cases, in which the patient was able to carry on an intelligent conversation during the entire progress of the fit, and after regaining his normal state remember in de-

tail everything said to him, or any incident that happened during the seizure.

The treatment of Jacksonian Epilepsy differs radically from that of other forms. Here there is evidence of cortical irritability to be sure, the most definite kind of evidence, but is not due to the local expression of any systemic condition, or at least rarely so, but to a definite focal lesion so profound in character as to indicate a pathological change in tissue. A fracture of the skull that injures the brain is one of the most common causes of this kind of cpilepsy. Just here allow me to digress a moment to call attention to the fact that the site of a blow does not always indicate the point beneath where the hemorrhage occurs, and where trepanning should be done for the removal of a clot; thus a blow on the forehead may rupture a blood vessel three or four inches away in the motor area of the cortex. Dr. W. W. Keen, of Philadelphia, in his admirable work on "Animal Experimentation," page 147, reports the case of a midshipmen at the naval academy, who while playing football received a blow at the "outer end of the left eyebrow." In six and one-half hours after Keen saw him, he had twenty-four convulsions, all limited to the right arm, and none were attended by loss of consciousness. Had the skull been opened at the place of external injury the clot would have been missed, but Keen. guided by his knowledge of cerebral localization acquired through animal experimentation, opened the skull some three inches from the seat of injury—i. e., over the right hand center in the cortex. "As soon," says Dr. Keen, "as the skull was opened at this point the clot was found and its thickest point being found exactly over the arm center where nine tablespoonfuls of blood were removed with the result that the patient's life was saved."

Surgical measures are more often effective in the treatment of Jacksonian Epilepsy than any other type. The commonly used

drugs that induce brain sedation are of little

Epilepsié Procursiva, or Procursive Epilepsy is another form of the disease rarely met with. Only three distinct cases of this kind out of more than five thousand five hundred epileptics of all types I have studied have been of this variety. One was a full-blooded Indian boy from the Cattaraugus Reservation in New York State, whose epilepsy developed in his thirteenth year, and whose case came under my care two vears later. He was singularly bright for his opportunities, agile and quick in his movements and fleet of foot. He had a grand-mal fit about every fourteen days. They appeared without warning of any kind, there being no initial cry or aura. If sitting when the fit appeared, he would spring into the air at a single bound, then run at the top of his speed for a variable distance, maybe a hundred yards, and once fully a quarter of a mile, before he fell to the ground in a grand-mal seizure. A young woman of twenty years, who spent her days in a hospital ward would charge its full length (one hundred and twenty feet) with all her might back and forth, whenever a fit was about to occur. Gould and Pyle (Anomilies and Curiosities of Medicine) report a case of this kind.

Ericheverria, in his excellent work on epilepsy, published forty-nine years ago, reports a similar case in detail. It is very likely that this is not a separate and distinct form of the disease, but one of ordinary grand-mal, in which the marked desire to run appears in the nature of a motor aura. Instead of a cortical irritation occurring in that part of the brain that governs the movements of lesser muscular groups, such as those of the finger and forearm, or the lower leg, it involves the center controlling the muscles of both legs; this means a correspondingly wide area of cortical irrita-On the other hand, this rapid and purposeless movement of the body may not

be due to cortical irritation produced from some blood toxin, but may be due to some irritation of the reflex center of the cord.

PROPAGANDA FOR REFORM.

Alfatone.—The Council on Pharmacy and Chemistry finds that Alfatone (The Norwich Pharmacal Co.) is a worthless alcoholic cordial and therefore ineligible for admission to New and Nonofficial Remedies. The council points out that alfalfa is good cattle feed and that only nostrum exploiters have suggested its use as a medicine for human beings. Based on claimed composition, each maximum dose (3 fluidrams) should represent 45 grains of alfalfa, 1 grain of taraxacum, 3-8 grain of gentian, 1-100 grain of berberin hydrochloride and 27 minims of alcohol. Since the bitter drugs are present in such small amounts that the preparation is almost devoid of bitterness and as the medicinal value of alfalfa is practically nil it is evident that whatever action Alfatone may have is due to the stimulant effects of the (Jour. A. M. A., Aug. 7, 1915, alcohol. p. 548.)

URICSOL.—The Council on Pharmacy and Chemistry reports that Uricsol (Uricsol Chemical Co.) is a mixture of well-known drugs, marketed with false claims as to therapeutic action, with misleading and meaningless statements as to composition and under a name which invites uncritical prescribing. Examination in the A. M. A. Chemical Laboratory showed Uricsol to be a solution containing a large amount of sodium phosphate (64.20 gm. in 100 cc.) with small amounts of lithium, nitrate, citric acid and glycerin, with probably some vegetable extract. (Jour. A. M. A., Aug. 14, 1915, p. 638.)

DUODENIN, ARMOUR. — Duodenin, Armour (Armour & Co.) is said to be prepared from the glandular or epithelial layer and mucous lining of the hog duodenum and to contain the maximum amount

of secretin and enterokinase in stable form. The Council on Pharmacy and Chemistry held that there is no evidence for the administration of secretin or enterokinase and that, so far as the available evidence goes, these substances are inactive when administered. The council voted that Duodenin, Armour, be not further considered until evidence is submitted to show that there are conditions in which secretin or enterokinase are absent and that these substances may be utilized by the organism if administered. (Jour. A. M. A., Aug. 14, 1915, p. 639.)

JUBOL.—Geo. J. Wallau, Inc., the U. S. agent of the French proprietary Jubol, advises physicians to "jubolise" their intestines with "Jubol" if they suffer from constipation, hemorroids, and a long list of other conditions. The Council on Pharmacy and Chemistry held Jubol ineligible for New and Nonofficial Remedies because the composition is not declared; because grossly incorrect and unwarranted claims are made for its therapeutic action; because the name does not indicate the alleged ingredients and because so much of the composition as is declared indicates an unscientific mixture. (Jour. A. M. A., Aug. 14, 1915, p. 629.)

URODONAL.—Urodonal is a French proprietary sold in the U. S. by Geo. J. Wallau, Inc., and is said to contain a chemical combination of lysidin, sidonal and hexamethylenamine. The Council on Pharmacy and Chemistry finds that Urodonal is ineligible for New and Nonofficial Remedies because it is marketed under inconsistent statements of composition and with exaggerated therapeutic claims; because the name is nondescriptive; the combination is unscientific and because it is marketed in patent medicine style. (Jour. A. M. A., Aug. 14, 1915, p. 639.)

OIL-OF-SALT.—According to C. A. Mosso all diseases are "systemic poisons" in the body and his "Oil-of-Salt" destroys all poi-

sons and hence cures all diseases. It is exploited chiefly to factory foremen and superintendents as a first-aid treatment. From an examination in the A. M. A. Chemical Laboratory it was concluded that "Oil-of-Salt" is a mixture consisting of about 2-3 linseed oil with 1-3 of a mixture of essential oils, including turpentine, camphor and sassafras, containing a little chloride and free hydrochloric acid. It appears that "Oil-of-Salt" is also exploited under the name "First Aid Treatment" by the Pan-Alert Laboratories, Chicago. (Jour. A. M. A., Aug. 14, 1915, p. 640.)

FISHER REMEDY.—According to the A. M. A. Chemical Laboratory, Fisher Remedy, a nostrum sold for the treatment of syphilis (five capsules cost twenty-five dollars), is composed of mercury subsulphate (Turpeth mineral) and mercury with chalk. (Jour. A. M. A., Aug. 21, 1915, p. 733.)

Pertussis Vaccine.—The New York Department of Health appeals to the physicians of New York for a more extended use of vaccine in the treatment of pertussis. Most favorable results have been obtained with the prophylactic use of the vaccine. (Jour. A. M. A., Aug. 21, 1915, p. 724.)

FORMAMINT.—Formamint are throat tablets said to contain a compound of formaldehyd and milk sugar. In the United States it is advertised to physicians while in England the public is asked to use it for affections of many kinds. The Council on Pharmacy and Chemistry reports that false statements are made in regard to the composition of Formamint; grossly unwarranted claims are made for its therapeutic properties, and therefore its exploitation to the public is a public danger. The council published the account of the exhaustive bacteriologic examination to call attention to the evils connected with Formamint and to the inefficiency of all methods of sterilizing the throat. (Jour. A. M. A., Aug. 28, 1915, p. 816.)

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THE SPECIALIST AND THE GENERAL PRACTITIONER.

In these days of the ever-present "specialist", there is a tendency to connect the greater with the lesser branches of medicine.

On every hand we see the publication of works intended to show the correlation between the various branches of medicine, to arouse interest between the representations of its various branches and to bring about co-operation between the specialist and the general practitioner. This co-operation is often of inestimable advantage to the patient, as well as a source of gratification to the associated physicians.

A study of the recent history of medicine shows that Rhinology was added to Laryngology as the result of practical demand. This interdependence being so intimate that a separation of the two is often impossible in practice. Otology and to a lesser extent ophthalmology have followed in the same groove and for the same reasons.

In other words, one specialty encroaches upon another the domain of the other; and it is impossible to establish definite boundaries.

Whenever it becomes necessary to examine more carefully those portions of the body which are anatomically and physiologically distinct, the growth of a specialty is but natural. Especially these regions by their position and function are so situated that it is impracticable to treat them exhaustively in the general medicine course.

When the foundation of the specialties is laid, however, it becomes necessary to include them in the scheme of general medicine.

A specialty should not be regarded as a thing apart and a kind of appendage; it should take an active part in all the problems with the solution of which general medicine is connected. To do this an active co-operation between general medicine and every one of the various specialties is indispensable.

MIXED VACCINES.

In recent years the use of drugs in the treatment of the sick has been supplemented to a great extent by the use of serums and vaccines. A commercialism has developed in the sale of these products, however, says The Journal of the American Medical Association, which threatens to rival that connected with the supplying of drugs, the shotgun mixed vaccines taking the place of shotgun nostrums. The difference is that in the case of vaccines it is the doctor who is directly duped, and not the layman; the latter is unable to use these products as he uses drugs taken by the mouth.

The purveyors of mixed stock vaccines claim that most infections are due to a mixture of organisms. For this reason, they say it is reasonable to use a mixture of several organisms supposedly concerned in the causation of the morbid condition. It is claimed, therefore, that mixed stock vaccines are legitimate and that their use should be encouraged by recognition on the part of the Council on Pharmacy and Chemistry, and that these products should not be placed in the same class with the shotgun proprietary mixture of drugs.

When we consider the infections, the etiology of which is known, there does not seem to be any evidence whatever that they are caused by the action of more than a single organism; is not the diphtheria bacillus the sole cause of diphtheria, the tetanus bacillus of tetanus, the meningococcus of meningitis, the typhoid bacillus of typhoid fever, and so on? For some of these, in addition to the fulfillment of Koch's postulates, we have specific antiserums which, without aid from "the other germs at work," exercise a definite curative effect. It would seem, then, that instead of few, if any, infections being due to a single organism, the reverse is the case. The mere presence of a multiplicity of organisms in cultures taken from an infected region by no means proves that the symptoms are due to all the organisms.

The essential basis of "vaccine therapy" is the use of the specific organism or its products, but the use of such preparations has gone far beyond such limitations. We are now advised by commercial houses that, when the specific organism is not known, a mixed vaccine or the mixed products of a number of organisms be used in the hope, it is to be supposed, that one of them may exert some specific action.

It is recognized that the shotgun prescription is unscientific and an admission on the part of its user of his failure to arrive at an accurate diagnosis; the same is true of the mixed stock vaccines. There is the added possibility of harm, because, as expressed by Vaughn, "the perenteral administration of any foreign protein is always attended by the possibility of harm." This warning applies not only to the mixed vaccines composed of the whole killed bacteria, but also to the mixed filtered metabolic products of a number of bacteria (phylacogens) which, on account of the possible presence of free toxic products, have additional potentialities for harm.

Vaccine therapy undoubtedly in some cases is a most valuable method of treatment; but when the claim is made that a combination of the dead bodies or filtered products of a number of different bacteria are useful for the treatment of several diseases, each with a different specific cause, the suggestion closely approaches quackery.

There is no doubt that the use of the shotgun, stock mixed vaccine should be checked and the scientific use of bacterial vaccines encouraged. How may this be accomplished?

Physicians should realize more keenly than is generally the case that the intelligent individualizing use of vaccine requires definite recognition of the causative organism, that is, etiologic diagnosis; and that the claims of those who push the sale of irrational ready-made mixtures must be ignored utterly. It is humiliating that members of the medical profession should allow themselves to be influenced by the scientific jargon which the vaccine maker uses with an air of authority.

Manufacturers should be required to state on the label whether the product is experimental or of established value, and the federal law regulating the sale of serums, vaccines and similar products should be amended to give the Public Health Service authority to prevent the interstate sale and shipment of worthless and possibly harmful biologic products, the burden of proof to be on the purveyor.

Those reputable manufacturers who attempt to do an honest business in spite of dishonest competition should be upheld and supported. Unscrupulous manufacturers will then find unprofitable their attempts to foist on our profession non-potent, and in many cases harmful products of this class.

To emphasize again, the use of the mixed stock vaccines of commerce is irrational because it is based on the conception that infections are caused by more than one kind of micro-organism; it is harmful because it encourages superficial examination, slipshod diagnosis and routine treatment without individualization; it is unnecessary because, when the physician desires to use more than one vaccine, he can inject them separately or mix them at the time of injection in such dosage as he chooses.

STREPTOCOCCI.

"It may be well to recall," says *The Journal of the American Medical Association*, in discussing an article in its issue of November 13th, "that we owe it especially to Rosenow's work that we now understand more clearly than before the part played by streptococci in causing gastric and duodenal ulcer, cholecystitis, appendicitis, herpes zos-

ter and erythema nodosum, as well as the joint and other infections long accepted as streptococcal in nature. In showing that streptococci cause gastric and duodenal ulcer, herpes zoster and erythema nodosum, Rosenow has broken new ground, and if future work confirms his results, particularly as to gastric and duodenal ulcer, great progress indeed will have been made. To this already formidable list of streptococcal diseases Rosenow now adds still another, namely, mumps, being careful to note, however, that the organism he finds does not seem to differ essentially from that described by Laveran, Herb and others as the cause of this disease. This raises the question whether all the organisms classed by Rosenow as streptococci will be accepted by bacteriologists as entitled to classification as streptococci. It would seem possible that some of these organisms, as, for instance, the one in mumps, may be found to be independent forms with rather constant affinities, such as illustrated by the menin-gococcus, for example. The fact that the organism isolated by Rosenow from mumps did not localize in the testicles is contrary to expectation, being another point that will require further investigation. Still another question, and one of fundamental importance, remains to be answered, and that is the question as to the antigenic properties of streptococcal strains of different affinities as postulated by Rosenow. Is a streptococcus that has special affinity for articular structures capable of causing the production of the same antibodies and subject to the action of the same antibodies as a streptococcus that has a special affinity for the gallbladder? Or are streptococci distinguishable into a number of groups by means of immunologic reactions in the same general way as pneumococci? This question must be answered before any real advance can be made either in serum treatment or in vaccine treatment of streptococcus infections.

"It is quite self-evident, so far as vaccine

treatment is concerned, that for the present the free use of stock streptococcus vaccines, as advocated with unwarranted assurance by manufacturers, is not justified. The only vaccine to be used in the infections under consideration, if any, is the autogenous, that is, one made from cultures of the organism isolated from the lesion of the patient whom the physician wishes to treat with vaccine. Only by so doing will the right thing be done, because the autogenous vaccine will represent most closely in all its reactions the particular bacterial strain that is to be attacked."

Cancer Department

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

The cure of cancer in any location in the body depends upon its complete ablation, while still a local process. The promptness with which radical treatment is instituted depends upon two factors: First, the early discovery of the local lesion of the patient; and second, the early recognition of its immediate or remote cancer potentialities by the patient's physician.

Cancerous growths occurring in the mouth, nose and throat, then, should offer an optimistic outlook because:

- 1. They are usually in plain view, and may be discovered in the early stages by the patient.
- 2. They are readily accessible to the physician's diagnostic armamentarium (inspection, palpation and the removal of sections for microscopic study).
- 3. The efficient advance guard of lymphatic glands in the neck, in the vast majority of cases, prevents distant metastases until late in the course of the disease.

Therefore it is our duty as physicians to keep constantly on the alert in our examinations, lest we overlook some precancerous lesion, which though trivial at the time of its discovery, should serve as a warning to us of possible future disaster. The one great fact upon which practically every authority is agreed concerning the development of cancer is that it begins on some epithelial

surface in an area subjected to constant irritation. Pathologic studies recently published by MacCarty are confirmatory of this fact which has been clinically observed for years; and his classification of the pathologic picture of beginning malignancy shows the response of epithelial cells to stimulation in three stages: Primary (benign), secondary (?), and tertiary (malignant) hyperplasia. The epithelial lining of the nose, mouth and throat is in no way different from epithelium elsewhere in this particular, as is evidenced by the development of cancer of the lip in men who smoke; the cancer on the inside of the cheek in the natives of India, from the sucking of betel nuts; and similar ones involving the side of the tongue in men who are constant tobacco-chewers, and practise allowing the quid to lie in one position beside the tongue.

Localized areas of leukoplakia, themselves due to chronic irritation, are areas of hyperplasia of the epithelium plus a deposition of fibrous tissue. They are, therefore, frequent precursors of cancer, and should never be treated half-heartedly. If the condition does not soon disappear after removal of the cause, it should be excised.

Cancer of the lip, though occurring in plain view, and being one of the lesser malignant tumors, carries with it the appalling mortality of 52 per cent. This is due

to delay in removing innocent-looking lesions while they are still in the precancerous stage. It is only by recognizing precancerous lesions and removing them, and by instructing our patients concerning the necessity of so doing, that we are going to be able to lessen the mortality of this disease. The mouth, nose and throat offers an ideal field for the accomplishment of this end.

AMERICAN FIRST AID CONFER-ENCE.

The first meeting of this organization was held in Washington, D. C., August 23-24. It is the aim of the Conference to secure a standardization in first aid packages and in other first aid equipment. With this end in view the following set of resolutions was adopted at the meeting:

WHEREAS, There is a great lack of uniformity in first aid methods; in first aid packages, and in other first aid equipment; and in first aid instruction, and

WHEREAS, Many of the aims of first aid are defeated thereby and needless suffering and expense incurred,

Therefore, Be it Resolved:

That this Conference recommends to the President of the United States that he appoint a "Board on First Aid Standardization," said Board to consist of one officer each from the Medical Corps of the U.S. Army, the Medical Corps of the U.S. Navy, the U.S. Public Health Service, the American National Red Cross, the American Medical Association, the American Surgical Association and the Association of Railway Chief Surgeons of America; this Board to deliberate carefully on first aid methods, packages, equipment and instruction and to recommend a standard for each to a subsequent session of this Conference to be called by the Permanent Chairman; the creation and maintenance of the said Board to be without expense to the United States.

Your Committee further reports that it

has personally consulted the Assistant Solicitor of the Treasury and he has given the opinion that there is no legal objection to the resolution or its purpose.

The Committee has also personally consulted the Secretary to the President and he has assured your Committee that it is his personal opinion that the President will take favorable action in the premises.

(Signed.)

Committee on Resolutions: W. C. RUCKER, Asst. Surgeon General U. S. P. H. S.; MAJOR ROBERT U. PATTERSON, M. C. U. S. A. (representing the Amer. Nat'l Red Cross); W. L. Estes, Chairman Comm. on Fractures, Amer. Surg. Ass.

Dr. Joseph C. Bloodgood, secretary of the Conference, in a letter addressed to the State Medical Journals, states:

"We would appreciate it very much if you would give the resolution and question sheet space in your Journal with notice that the secretary of the First Aid Conference will welcome answers to the questions from any surgeons of experience in the treatment of accidental injuries, and that these answers will receive full consideration in the deliberations of the Board on First Aid Standardization."

The following are the questions submitted to surgeons and others interested in the movement:

- 1. What has been your experience with the most available first-aid package and dressing for small and large wounds?
- 2. What has been your experience with the immediate employment of antiseptics in accidental wounds; what antiseptic have you used, in what strength, and how applied? Have you employed tincture of iodine; if so, how and what have been the results?
- 3. What in your experience has been the most efficient and most readily applied method of fixation for injuries of the (a) upper and (b) the lower extremity?
- 4. Have you considered the construction of a stretcher, which, in addition to serving

as a means of transportation of injured, will have appliances for the fixation of the upper and lower extremity, somewhat along the lines of a Bradford splint, or the Gihon naval splint?

5. Please state your views on some liquid ointment dressing which would be available for first aid in large wounds and burns with the object of preventing the usual drygauze dressing adhering to the wound and rendering subsequent dressings painless.

The Journal is glad of an opportunity to heartily endorse this movement and urges upon the surgeons of Florida an active cooperation. All communications should be addressed to Dr. Joseph C. Bloodgood, Secretary, 904 N. Charles St., Baltimore, Md.

SEIZE SUBSTITUTE SPECIFICS.

Cheap Imitations of Well-Known Preparations Peddled to Drug Store Proprietors.

Several shipments of worthless imitation drug products have been seized by the officials in charge of the enforcement of the Food and Drugs Act. Itinerant peddlers are selling to drug stores large quantities of preparations made up and labeled in imitation of high-priced patent medicines of foreign origin. Only small quantities of the genuine medicines have been imported since the war began, causing a great increase in prices. Unscrupulous manufacturers are attempting to reap a harvest by substituting for the genuine medicines cheap chemicals with no medicinal value whatever. In order to make it difficult to trace these preparations to the parties responsible for their manufacture, they are not usually distributed through the regular channels of commerce, but are peddled about to drug stores by itinerants who make immediate delivery at the time of sale.

A preparation put up in imitation of

"Neosalvarsan," a medicine which has largely displaced the preparation known as 606 in the treatment of syphilis, is being distributed to drug stores in this manner. A sample labeled "Neosalvarsan," which was recently examined by the Department, was found to be nothing more than salt colored with a cold tar dye, none of the genuine neosalvarsan whatever being present. The label on this product was an exact reproduction of the genuine imported neosalvarsan, or it was an original container refilled with the imitation article.

This fraud is held to be particularly flagrant, according to the medical experts of the Department, not alone because a worthless preparation is sold for a high price, but mainly because neosalvarsan is usually administered by injection directly into the blood of the syphilitic patient. The cheap substitute is not only worthless in the treatment of this disease, but when injected directly into the blood might work considerable injury.

Other preparations which are peddled to druggists and purport to be acetylsalicylic acid, commonly known as aspirin, a medicine of foreign origin regularly prescribed by many physicians for certain ailments, have been seized by the officials in charge of the enforcement of the Food and Drugs Act, because an analysis showed that the products were worthless imitations.

Owing to the manner in which these preparations are peddled about, it is difficult to trace the interstate shipment of any of them, and in cases where there has been no interstate shipment the Federal Food and Drugs Act has no jurisdiction. On information furnished by the Federal authorities some of these imitation goods have been seized by city officials who had authority under State laws to proceed when there had been no interstate shipment.

Reviews from Current Literature

TYPHOID PERFORATION

Gibbon, John H.: Typhoid Perforation. Annals of Surgery, Vol. LXII, 1915, p. 385.

In a paper read before the American Surgical Association, Gibbon reports results and findings in 139 cases of typhoid perforation treated at the Pennsylvania Hospital during the fourteen-year period from 1901 to 1915. He also reviews 16 cases of supposed typhoid perforation which were subjected to operation, and no perforation found.

Of the 139 cases of true perforation, 112 were operated upon with 27 recoveries, or a recovery percentage of 24.1, while of the 27 cases in which no operation was done, all died. This fact stands out most significantly. In commenting upon the inadequacy of a small series of cases in estimating operative mortality, the writer states that "between 1909 and 1914 there were 15 operations with no recoveries, but in the past vear there were 10 operations and 5 recoveries," the operations being done in the same hospital, by the same group of surgeons, under practically similar conditions of patients and technic, except that in the first group of cases the average time between the first symptoms of perforation and operation was 20 hours against 10 hours in the second group.

"With these facts before us, no one can doubt that the difference between mortality of 100 per cent and one of 50 per cent is at once explained. Delay after symptoms of perforation develop is fatal, every hour is valuable and one must not wait until he is sure that a perforation has occurred before operating. What we must determine is whether the symptoms are suggestive enough to warrant exploration. It is far better to make the mistake in a few cases of operating when no perforation is present than to delay operation until the diagnosis is certain."

In analyzing the 16 cases operated on for supposed perforation in which no perforation was found, the writer states: "The most striking feature of these 16 cases is that in but 2 did death follow an exploration in typhoid fever, where no cause for the symptoms could be found at operation. Five such operations were followed by recovery. In 2 of these cases it is probable that the symptoms which seemed to indicate operation were due to pneumonia. In 3 of the 16 cases acute appendicitis was found, 1 patient died from pneumonia, 1 from peritonitis, and 1 recovered. In another case, hemorrhage probably produced the symptoms suggesting perforation. This case also recovered. A suggestive case in this group is the one in which pain, tenderness and rigidity were due to salt solution introduced into the abdominal wall. Another interesting case is the one in which a diagnosis of acute appendicitis was made and in which a perforative stage of ulceration was found. It may be well to say that in many of the cases where perforation was found, the indications for operation were less definite than in these cases and that we are dealing with a condition which, if we wait until the signs of perforation are absolutely positive, we still save but few patients."

He summarizes the findings in 27 cases in which operation was not done, but perforation found at autopsy, as follows: "These 27 cases presented some interesting features. In the first place, but one patient died, refusing operation, although delay in obtaining consent was frequent throughout the whole series. In 7 cases perforation was suspected, but no operation was done, because the patient's condition was considered to indicate a rapidly-approaching death and the uselessness of operation. Lung conditions, varying from a bronchitis to tuberculosis with gangrene of the lung, constitute the cause of error in a large number

of the cases. In reviewing all the cases it is quite remarkable how seldom operation was done for perforation when a lung condition was responsible for the symptoms and how frequently a lung condition caused us to attribute the abdominal symptoms to it when perforation was also present.

"Hemorrhage was frequent in many of the undiagnosed cases and undoubtedly contributed to the error. In but 3 instances is the failure to recognize a perforation attributed to delirium and profound toxæmia.

"I should say that the two practical lessons to be derived from a study of those 27 cases is that we must not forget that a pneumonia and a perforation frequently coexist and that the same is true of hemorrhage and perforation."

In this general summary, Gibbon states that errors and bad results are due to indicision and hesitancy in comprehending the importance of immediate action, rather than failure to recognize the condition. He lays great stress upon the prominent perforation symptoms of sudden abdominal pain, muscular regidity and shock and believes that the leucocyte count is of but little value in early diagnosis, since leucocytosis does not usually appear before eight hours; he also states that changes in pulse or temperature are of no value since both are affected by hemorrhage as well as perforation. suggests careful elimination of thoracic lesions, and advises always a digital rectal examination to determine acute tenderness.

The only treatment offering even remote hope for recovery is operative exploration, immediately after the first symptoms appear; every hour's delay increases the mortality. After twenty hours operation is apparently useless.

Gibbon believes that full general anæsthesia is also responsible for many deaths, and advocates operation under local infiltration anæthesia preceded by morphine-atropine, with light gas-oxygen or ethyl chloride general anæsthesia if absolutely re-

quired, and then for as brief a period as possible.

"The question of how the perforation itself should be treated is still a matter of controversy. In the cases here reported, a closure of the perforation with drainage of the abdomen has been the rule, but in a number of cases the perforated bowel has been sutured in the wound and allowed to drain.

"Hays of Pittsburgh has operated upon 38 cases with a recovery rate of 36 per cent which constitutes the best report with which I am acquainted.

"The question of irrigation and the type of drainage must be left largely to the operating surgeon to decide. Personally I do not like irrigation and always employ a rubber-covered drain. Continuous enteroclysis is the most important part of the after-treatment. The Fowler position, although of great help in many cases of perforative peritonitis, is not always advisable in typhoid fever, as the patient is often to weak to stand it."

In conclusion Gibbon states that most of the early post operative deaths are due to shock and toxemia, while those occurring late result from lung complications and peritonitis.

R. C. T.

AUTOLYSIN

Weil, Richard: The Autolysin Treatment for Cancer. Journal A. M. A., Vol. LXV, 1915, p. 1941.

A mixture, since called autolysin, had achieved some local reputation and a degree of newspaper notoriety in the treatment of cancer before it was brought by A. Horowitz to the General Memorial Hospital, New York City, with a request that its therapeutic effectiveness in cancer be made a subject of study. Dr. Beebe, having stated to the hospital board that he was in possession of complete knowledge of the remedy, was given the privilege of applying the treatment in a considerable number of cases. The author had general supervision of the clinical

activities of the institution, and the duty of watching the progress of these cases.

He writes that the cases entrusted to Dr. Beebe comprised a wide and diverse group, including cancer and sarcoma of the various tissues and organs of the body. Dr. Beebe has stated elsewhere that the cases treated "represented the most hopelessly incurable and inoperable group of patients." This statement is misleading. That the cases were inoperable is true. That all of the patients were moribund, or even in a very serious physical condition, is, however, not true. Some of the cases put in Dr. Beebe's hands were in good physical condition, and here the treatment, if of real value, should certainly have demonstrated its virtue. Then, too, it must be remembered that some of the cases were given the benefit of radium or Roentgen-ray treatment, while autolysin in addition was administered.

Since January 1, 1915, twenty-three cases have been treated in the wards of the hospital by Dr. Beebe with autolysin. Of these twenty-three cases, fourteen died in the hospital, and eight were discharged unimproved. Only one, to the best of our knowledge, is at the present time in a condition which could be described as an improvement on that presented at the time of admission to the hospital.

In those cases in which the mixture was injected directly into the tumors, there resulted necrosis, suppuration, and sloughing of portions of the tumor masses. Such a result presents not the slightest advance on methods which have been in use for centuries in the treatment of cancer. The use of the mixture as a poultice produced no better results in cleansing ulcerating tumors than is regularly obtained by usual topical applications. The constitutional treatment (subcutaneous injections of autolysin) in no case appeared to exert any influence of itself.

A fairly large proportion of our patients, certainly over half, were most unfavorably affected by the local injections. The pain

of injection was frequently so severe that the patients refused to accept, or the interne to administer the treatment. The general effect on the health and nutrition in many cases appeared to be so deleterious as to dictate the cessation of the treatment.

In conclusion the author says: "The majority of those who will read this article have had practically no means of judging of this treatment through their own observations. Cancer patients are peculiarly gullable, and will snatch at any straw in the hopeless struggle against their disease. Surely they deserve to know all we can tell them of the treatment which is so enticingly portrayed. My own personal belief, founded on long observation, is that autolysin is useless; that it adds nothing of value to the methods now generally accepted; and that it often aggravates the sufferings and accelerates the death of the patient."

P. S.—Dr. Beebe's connection with the Cornell University Medical School and with the General Memorial Hospital terminated some time ago.

Under Propaganda for Reform of the same journal will be found a series of telegrams that passed between a Seattle physician and Dr. Beebe. They show the commercial spirit in the exploitation of the treatment.

An editorial on the treatment found in the same number of the journal concludes: "Whether the 'autolysin' mixture may possess some elements of value in combating the scourge of cancer must be left to the future to decide. Even should it be found of use this would not alter the fact that the methods of exploitation have been unworthy of scientific men, and in their effects on the public, the very refinement of cruelty."

T. T.

CHENOPODIUM IN UNCINARIASIS

Bishop and Brosius: Chenopodium in the Treatment of Uncinariasis. Journal A. M. A., Vol. LXV, 1915, p. 1610.

This preliminary report emanates from Santo Tomas Hospital, Panama City, where

the authors are resident physicians. They say that with chenopodium it is far easier to accomplish a cure than with thymol, because of the simpler method of its administration, and the less drastic results following its ingestion. The oil is put up in capsules of 8 minims each, and is administered 2 capsules to the dose. Three doses are given, 2 hours apart. The oil is followed in 4 hours by 2 ounces of castor oil.

In contrast, the accepted routine treatment of uncinariasis with thymol at Ancon and Santo Tomas Hospitals is as follows: At 4 p. m. calomel is given, the supper is restricted to liquids, and at 8 p. m. 2 ounces of magnesium sulphate are administered. The following morning the patient receives 60 grains of thymol in three doses of 20 grains each at the hours of 4,5 and 6, respectively, and at 9 o'clock 2 ounces of magnesium sulphate, the diet being resumed at noon if the bowels have moved well.

The dosage of both chenopodium and thymol, in the treatments outlined, is that for adults; for children 1 drop of the oil of chenopodium may be given for every year of the child's age. It should be repeated only twice.

The treatment with the oil of chenopodium is attended with much less inconvenience and discomfort to the patient than with thymol, there being no dietic restrictions and no excessive purging. Another important consideration is the time required to effect a cure. With thymol the effects of the purging and the drug on the patient practically prohibit repetition in less than five or six days. With chenopodium the authors have often repeated treatments at intervals of three days and never seen the prostration and weakness which is often occasioned by thymol.

In treating series of cases, one with chenopodium and one with thymol, it was found that stools passed following chenopodium treatments always contained more worms than stools following thymol treatments.

ACUTE PELVIC INFLAMMATION

Ward, G. G., Jr.: Clinical Observations on the Treatment of Acute Pelvic Inflammations. Am. J. Obst., 1915, IXXI, p. 881.

This paper is based upon a study of a series of cases by the author. He concludes that a large proportion of the cases of pelvic inflammation following labor or miscarriage will recover without abscess formation if left to themselves. When pus forms in small amounts it may be absorbed naturally.

In very many cases abscess formation is directly caused by procedures of the physician at the onset of the infection. Curettage or intra-uterine treatment is contra-indicated at such times.

Many cases are operated on too early or even when it is not necessary at all. From this results a prolonged convalescence, and occasionally even a fatal termination.

Incision and drainage are not indicated until collections of pus are definitely localized. Whenever vaginal drainage fails to cure a pelvic abscess it usually means that the drainage was not kept up long enough.

Whenever in acute pelvic abscess the indications for interference are present the operation of choice is a simple incision and free drainage.

G. R. H.

CÆSAREAN SECTION

Holmes, R. W.: Obstetrics, a Lost Art; A Criticism of the Premiscuous Indications for Cæsarean Section, Surg., Gyne, and Obst., Vol. XXI, 1915, p. 636.

The author's paper is based upon the views elicited by personal discussion with obstetricians whose judgment is worthy of merit, rather than on any perusal of current literature.

It is his conviction that the indications for cæsarian section have been inordinately broadened until they have at present assumed a dangerous, if not a ridiculous aspect. "Today the medical profession is seized with the same *furor operations* for cæsarean section as obtained a quarter of a century ago in the case of oophorectomy."

The author believes that soon there must

be a revulsion of feeling and that "the surgical propensities of the present will be enormously curtailed."

There is essentially only one scientific indication for cæsarean section — when there is such pelvic contraction that it is impossible to obtain a living child by any other means.

When the pelvis has a contraction whose index is above seven and one-half centimeters many problems arise. No one should lay down indications for cæsarean section in such cases unless he has a close and intimate knowledge of pelvic mensuration and fetal palpation, as well as an accurate knowledge of the parturient woman in normal and pathological labor. A surgeon, gynecologist, or general practitioner who has not had that experience and practice has not the matured judgment or qualification for the interpretation of conditions and indications for a cæsarean section.

The author discusses in detail cæsarean sections in cases of obstructive tumors, eclampsia, and placenta previa, and draws the following conclusions:

"A contracted pelvis alone should be considered as the single, definitely permanent indication for cæsarean.

"No cæsarean should be considered, unless the baby is in good condition, unless it is the only resort.

"Per se, eclampsia, placenta previa, or other specious indications do not offer warranty for the operation unless there be some contributing obstetric anomaly.

"All women with a relative indication (pelvic contraction) should be allowed to go into labor so they may have a real test of actual cephalo-pelvic disproportion. During this test no vaginal examinations should be countenanced, but labor should be controlled by abdominal palpation and rectal examination.

"It is neither wise nor expedient to permit a patient with an absolute indication or where it is a repeated section, to enter labor.

"A cæsarean scar is a vulnerable point

in the uterine wall, and is likely to rupture; therefore, a cæsarean section once is a cæsarean section always. The only exceptions worthy of consideration would be a multipara with soft, lax, or torn pelvic floor.

"Cæsarean sections have been performed on inordinately broadened indications which in many respects are not defensible. The indications should be restricted.

"Obstetric manual dexterity has been compromised by the development of cæsarean section. The beneficent results from obstetric procedures should be emphasized.

"One who has a mortality of five or more per cent for his cæsarean sections should revise his indications—should use discrimination in his selection of cases." G. R. H.

GLAUCOMA

Lamb, Robert Scott: Is Migraine a Forerunner of Glaucoma? Ophthalmology, Vol. XII, 1915, p. 82.

"Having become interested in the possibility of migraine being a forerunner of glaucoma, I began taking the tension by palpitation in cases coming either to the office or to my clinics. Occasionally the tension was T+1 and sometimes only slightly T+. In order that there might be more accuracy about the matter I determined thereafter to take the tension of both eyes in all cases presenting the history of recurring attacks of unilateral headache with or without scintillating scotoma. In all my cases I found the tension up a few points, sometimes markedly so. Occasionally the tension up in one eve only, the eve on the same side as the unilateral headache. More often the tension was up in both eves and in some cases I found that where the tension was up in both eves the headache had a tendency to become general, although it began on one side; and occasionally cases occurred in which the tension of the eve on the side opposite the one having usually the unilateral headache was higher than the tension of the eye on the side with the headache.

"I have yet to examine a patient whose migraine headache was associated with intense photophobia, that I did not find chorio-retinitis especially in the central region of each eye, and the exudation or destruction much more marked on the side where the unilateral headache had occurred.

"Let us look for a moment at several points of similarity between migraine and glaucoma. First the fact that both are inclined to occur in families, as in the case of parent and child, and among those whose physical characteristics are similar, such as the color and general appearance of the eves; and to carry the point further, I have analyzed the refractive error in certain families and found that in some instances the amount as well as the kind of refractive error was the same. In many other instances they were similar in kind if not exactly alike in amount. To carry the point beyond this I may say that in one family in particular the symptoms have been similar in six boys out of seven (the family is one of eleven boys, seven of whom I have examined). The seventh had myopia in one eye, with mixed astigmatism in the other; all the other boys had hyperopic

"On ophthalmoscopic examination chorio-retinitis is more marked in the migrainous eye, usually more marked in the central region, which would account for the sudden blindness or obscuration of vision occurring in these attacks, also for the photophobia. All this complex is relieved by one or two drops of eserine salicylate or sulphate, one-half grain to ounce solution. It has been a well-known fact that migraine has been relieved by pilocarpine, either as a diaphoretic or by local use alone, just as cases of prodromal glaucoma for many vears have been controlled by myotic treatment." W. S. M.

TONSILAR ABSCESSES IN DIPHTHERIA

Knack, A. V.: Tonsillarabszess bei Diphtherie. Zeitschrift für Hygiene und Infektionskrankheiten, Achtsigster Band, Zweites Heft, Vol. LXXX, 1915, p. 163.

Knack reports a number of tonsillar

abscesses occurring in a series of five hundred cases of diphtheria. It is found that the mortality which had previously been 11.6 per cent rose to 13 per cent in spite of the fact that the doses of antitoxin had been large and the immediate therapeutic results had been good.

It was found that the increase in mortality was due to complication by peritonsillar abscesses. This occurred in 1.8 per cent of cases. In this series the abscess was found once in a child, twice in youths, and six times in adults. In two cases the onset of diphtheria was simultaneous with the appearance of the tonsillar abscess. The other cases occurred on the third, fifth and sixth days, and twice on the tenth and twelfth day, after the initial attack of diphtheria.

Streptococcus hæmolyticus was found in six cases from the pus in these abscesses. The diphtheria bacillus was never found in the pus. At post mortem myocarditis was found in all cases of diphtheria, although it was detected clinically in only 20.8 per cent of cases.

CLINICAL EXPERIENCE WITH IODINE SPRAY FOR DESTRUCTION OF DIPHTHERIA BACILLI

Ruben, Martha: Klinische Erfahrungen über die abtotung von diphtherie-baxillen mit Jod-Sprav. Zeitschrift für Hygiene und Infektionskrankheiten, Achtzigster Band, Zweites Heft, Vol. LXXX, 1915, p. 184.

Ruben states that the combating of infectious diseases by the means of Serotherapy is still to be regarded in the developmental stage, as well as efforts to attack the bacilli themselves en-masse, their method of existence and origin.

A large number of disinfectants have been recommended for this purpose, the result of which are not generally satisfactory. The tonsils are thought to be the principal factors in the relapses in diphtheria, and the reappearance of the diphtheria bacillus is a result of fresh infection of these surfaces from organisms which are lodged in the nasal pharynx.

Ruben has attempted to disinfect these organs and passages by means of an iodine spray. For this purpose a heated iodoform vapor has been used. For the purpose of experiment a number of convalescents with a positive bacilli finding were selected. Only one bacillus carrier case was treated. The standard of two negative cultures on successive days was adopted on account of its use in practice. Cultures were examined after 24 and 48 hour incubation. The tendency of the diphtheria bacilli to disappear from the throat appeared to be about the fourth week. If they persisted after this time, the patient was considered a bacillus carrier.

With the iodine spray the results were as follows: Nine became free, eleven still showed bacilli, and one gave a doubtful result in a total of 21 cases treated.

Abel reports more favorable results: Forty-two cases bacilli disappeared after one treatment, twenty-eight after two treatments, seventeen after three and two no result. He is quoted as observing severe reactions but claims the worst amounted to only a superficial necrosis. Ruben claims that nearly all reactions were severe and followed by necrosis and a chemical inflammation which in some cases lasted six days. One case developed pain in the nose with necrotic patches in both nose and mouth, while another case developed a severe angina. Some of the patients suffered from lachrymation and an iodide taste in the mouth.

Ruben's conclusion is that the iodine spray for carriers can only be recommended for want of something better. Reactions are so severe as to almost preclude its use. H. H.

ERADICATION OF TRACOMA

White, W. W.; White, P. C.: The Surgical Removal of the Tarsal Cartilage and Palpebral Conjunctiva in 402 Cases for the Prophylaxis, Present and Future Elimination and Eradication of Trachoma, Opththalmology, Vol. XII, 1915, p. 1.

The authors write from personal experience in over one hundred thousand cases of trachoma among the Indians of the United States, and among about three hundred cases in the colored population of this country. They have performed this operation, "The Surgical Removal of the Tarsal Cartilage and Palpebral Conjunctiva," in four hundred and two cases. Inasmuch as we have found that the treatment of advanced cases of trachoma under the use of drugs to be practically futile, the method in our experience of contending with this insidious and disastrous disease is: The removal of the tarsal cartilage and the palpebral conjunctiva.

It has been the experience of every oculist with a large trachomatous practice to treat cases for years with slight improvement, and then a customary reaction; again an improvement; when finally the reaction has returned once too often and with disastrous results to the vision of the patient.

Trachoma is a detriment to the patient, as it ruins his chance of success in life and makes him the common carrier of the disease to those with whom he comes in contact. Innocent ones suffer unsuspectingly. He is being treated by drugs and other measures and at sometime he is apparently cured, to himself and to his doctor; yet after a year, more or less, the disease returns, and in time and gradually his vision becomes more impaired without any subjective symptoms. There is no recurrence or reinfection after the pathologic tissue is removed.

With the preceding introductory they lay down the following rules for prophylaxis:

All sanitary and hygienic measures regarded and strictly enforced.

Diagnosing the disease.

State and Federal Public Health Quarantine. Unlimited authority given to the Commissioner of State Department of Health.

Proper surgical and medical treatment for incipient cases of trachoma, and proper length of time for observation as a cure.

The removal of the tarsus and palpebral

conjunctiva and other diseased trachomatous tissue in advanced cases of trachoma, whether the cornea is involved or not, as proposed by the authors.

Drugs:

The authors intend to mention only the drugs they continue to use after their experiences have taught them their efficiency in their hands.

Copper sulphate has stood pre-eminent in drug treatment of the disease by the authors in their experience. It has given them better results than any other one drug. This drug, I am sorry to say, has been indiscriminately used, and some chemical cicatrication of tissue produced. It has been misused like salvarsan. The effect of copper sulphate is no doubt due to the polymorphonuclear leukocytosis attacking the disease, not only in the follicle but also in the infiltration.

The next drugs in order of efficiency are silver nitrate, bichloride of mercury, yellow oxide, tannic acid, boric acid, iodine, iodoform, thiosinamine, dionin, brown ungt. (Casey A. Wood), while argyrol in the author's hand has not been effective. Friction massage of the eyelids with boric acid, calomel, iodoform of bichloride of mercury solution, has been of good service to the author.

Drugs do not attack the deeper pathologic tissues to any extent. Numerous surgical measures have been the most popular and has been of inestimable service. The instruments in use are the Knapp roller forceps, the Prince, Noyes, Kuhnt and a few others. The Knapp is a very popular instrument. Trachoma rasps are also used, as well as grattage with a tooth brush (Dr. Allen Allport). The thumb nail has been used by some operators.

The authors are partial to the Expression operation in certain degrees of trachoma, but as a general lesser surgical measure than the removal of the tarsus. In all stages of trachoma they are in full accord with the sandpaper method. In their 2,200

operations or more by this method the discomfort to the patient was less than by other surgical measures.

W. S. M.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies".

RADIO-REM, OUTFIT No. 4.—An apparatus designed for the production of radioactive drinking water by the action of radiomic sulphate contained in terra cotta plates. It consists of two plates contained in 250 cc. bottles; when the bottles are filled with water the two plates impart about 1.8 microcurie (5,000 Mache Units) to the water in twenty-four hours. For action, uses and dosage refer to the article on radium in New and Nonofficial Remedies. Schieffelin and Co., New York. (Jour. A. M. A., Oct. 9, 1915, p. 1281.)

HISTAMINE HYDROCHLORIDE.—The hydrochloride of the base beta-iminazolylethylamine (histamine). It is a valuable reagent for the standardization of pituitary preparations.

Імпо-Rосне.—A name applied to histamine hydrochloride.

AMPULES IMIDO, ROCHE.—Each ampule contains 1.1 cc. of an aqueous 1 in 1,000 solution of Imido, Roche (1 cc. contains 1 mg.). Hoffmann-LaRoche Chemical Works, New York City. (Jour. A. M. A., Oct. 16, 1915, p. 1367.)

TETANUS ANTITOXIN FOR HUMAN USE.—Marketed in syringes containing 1,500, 3,000 and 5,000 units each. Cutter Laboratory, Berkeley, Cal.

NORMAL SERUM (FROM THE HORSE).—Marketed in syringes containing 10 c.c. Cutter Laboratory, Berkeley, Cal. (Jour. A. M. A., Sept. 25, 1915, p. 1111.)

Publisher's Notes

CONCENTRATED ANTIDIPHTHERIC SERUM.

Recognizing the inconvenience and other objectionable features attending the subcutaneous administration of bulky doses of diphtheria antitoxin, some of the leading manufacturers years ago sought to isolate the antitoxin from the serum, in an endeavor to obtain a product that would represent as great a number of antitoxin units as possible in small compass. Experiments disclosed the fact that the antitoxic element in the serum is a globulin, or has such properties that it precipitates with the globulins. Various methods, all of them based upon the principle of repeated precipitation, have been employed to eliminate the non-essential portions of the serum, leaving only the globulins or antitoxin. The method employed in the laboratories of Parke, Davis & Company results in a globulin that is free from many of the albuminous substances that cause the undesirable by-effects which sometimes attend the administration of antitoxin. These proteins, which are removed in the process of concentration, are largely responsible for the toxic symptoms which serums may produce in susceptible patients. With the concentrated serum (globulin) it is found that rashes and other undesirable symptoms occur less frequently than with untreated serum, and when they do appear they are of a milder type.

In the production of Parke, Davis & Company's diphtheria antitoxin, care is exercised that the horses selected for the purpose shall be absolutely free from disease. In pursuance of this purpose the animals are kept for several days under close observation in a detention stable. During this time thorough physical examinations are made by competent veterinary surgeons. Not only must the animals be healthy and vigorous when inoculated—they must be kept so; and they are fed, stalled, groomed and exercised with this end always in view.

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ORIGINAL ARTICLES

SUPRA-CLAVICULAR BRACHIAL PLEXUS BLOCK.*

J. KNOX SIMPSON, M. D., Jacksonville, Fla.

The use of regional anæsthesia serves to spare the patient so many discomforts, both mental and physical, which necessarily obtain when ether narcosis is used, that it is rightly becoming more popular each year. Its scope of usefulness is constantly widening; more and more extensive work is being done with it, as surgeons acquire more finesse in its application and in handling the severed tissues of the conscious patient.

It is not my purpose in this short paper to go into the general subject of regional anæsthesia, which is so thoroughly covered in the late textbooks and the scattered mass of surgical literature on the subject.

I simply wish to call your attention to one of its many useful fields. For the past few months I have been using perineural blocking of the brachial plexus for work on the upper extremities, and though my experience is as yet slight, I feel that until I began using it, I had been neglecting one of the really good things in minor surgery. It is filling a want, of the presence of which I had been subconsciously aware for a long time. Not only every surgeon, but every practicing physician sees many times cases which he feels are almost too small for general anæsthesia, and which still are not well adapted to the use of local infiltration anæsthesia. Included in this list are felons, palmar-fascia infections, tendon sheath infections, mashed and badly lacerated wounds about the hands and forearms, cut tendons and nerves, fractures, etc. Brachial plexus anæsthesia finds in this class of cases its most useful field. It is easy to apply; can be done in the office or the home, takes only a few minutes, and requires no special apparatus and only an ordinary amount of skill. It comes under the class of peri-neural blocking, where the anæsthetizing fluid is deposited around the nerves, and blocks them by direct absorption.

The anatomy of the region (Fig. 1) lends itself particularly favorably to its application, in that the plexus at the point of blocking occupies a small area, which is surrounded by such definite and easily recognized anatomical landmarks. Emerging from the space between the scalenus anticus and scalenus medius muscles in the posterior triangle of the neck, the trunks of the plexus run downward and outward, close to and just external to the subclavian artery, to pass over the first rib and beneath the clavicle. Therefore, the plexus at the point of blocking occupies a space which is bounded anteriorly by the clavicle, internally by the subclavian artery and posteriorly by the first rib; and is surrounded by loose areolar tissue which will accommodate a considerable quantity of solution.

In my work I have followed the technique as described by Neil and Crooks, using as the anæsthetizing solution, 20 c.c. of 2 per cent novocain, containing 10 drops of 1:1000 adrenalin. The technique of the injection is as follows: The patient sits facing you with the head turned slightly to the side opposite

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

¹Brit, M. J., 1913, 1, 338.

which the injection is to be made, and the shoulder on the side of the injection slightly lowered. Palpation of the supra-clavicular fossa locates the subclavian artery which is followed down to where it crosses under the

needle about 5 c.m. long is now inserted in the proper position, having a direction downward, backward and inward, with the point directed about in the direction of the third dorsal vertebra, care being taken not



Fig. 1. A dissection has been made to show the relation of the Brachial plexus to the anatomical landmarks in this region.

clavicle. In the angle formed by the clavicle and the underlying artery (Fig. 2), just above the clavicle and just external to the artery, is the point where the needle should be inserted. The skin is prepared with tincture of iodine. The barrel of a 20 c.c. record syringe is filled with the novocain solution and left ready to attach to the needle. A fine

to have any of the solution in the needle as it might interfere with the demonstration of paræsthesia. The plexus, depending upon the amount of overlying fat and subcutaneous tissue, lies from 1 to 3 c.m. below the surface. The guide to the depth of the needle puncture, however, is twofold. First, the paræsthesia extending down the arm as the

needle comes in contact with the plexus; and second, the impinging of the point of the needle on the upper surface of the first rib. The plexus lies just above the first rib, so that if the needle strikes the rib before should be attached to the needle and its contents injected.

Anæsthesia usually begins in 3 to 5 minutes and is complete in 10 to 15, though it may take as much as 30 minutes. During



Fig. 2. The position and direction of insertion of the needle is shown; and the course of the Subclavian artery indicated by the dotted line.

paræsthesia is felt, the plexus has been missed and the needle should be partially withdrawn and reinserted, usually nearer the artery. The sole guarantee that the needle is in the plexus is the subjective paræsthesia down the arm, and no injection should be made until this is definitely felt. As soon as the plexus is located, the syringe

this time the field of operation can be prepared and the towels applied. Skin anæsthesia should be determined with needle pricks before actual work is begun. Muscular paralysis is usually complete with complete analgesia. Sensation begins to return usually in 30 to 45 minutes and is complete in one hour. The only discomfort experienced by the patient is the passing of the needle through the skin when the injection is made; the paræsthesia does not amount to a real discomfort and is not at all painful.

The following is a summary of my cases:

Number of cases	16 15	
Partial anæsthesia in	1	
Average time between injection and	1	
beginning of operation	1.0	mins.
Average duration of anæsthesia		mins.
Longest operation	45	mins.
The cases were as follows:		
Tendon sheath infections	3	
Infection of the dorsal cellular tissue of		
the hand	2	
Palmar infections	2	
Amputations of the thumb	2	
Colles fractures	2	
Automobile fracture of radius	1	
Fracture upper third of radius	1	
Reuniting cut tendons	1	
Reuniting muscles and fascia in knife		
wound of forearm	1	
Anastomosis of cut musculo-spiral nerve	1	
The control of car intiseate spirat here	-	

I will only report in detail the histories of two of my cases, one because of a partial failure to get the desired result, the other because it is the most extensive operation in this series of cases.

The case of failure was that of a negro boy, twenty years old, a patient of Dr. N. A. Upchurch's, who had a badly crushed thumb. When I palpated the supra-clavicular fossa to locate the point for injection, I found that he had at some time in the past sustained a fracture of the clavicle on that side at the exact point where the subclavian artery passes under it. There had been union in an overridden position so that the outer end of the proximal fragment projected about 2 c.m. above the normal upper border of the clavicle, directly over the artery and plexus. This necessitated making the injection so high that I predicted failure before it was made. As a result of not being able to deposit the solution in the proper place, we secured a very patchy and unsatisfactory anæsthesia; largely confined to the pectoral and deltoid regions, due to the contact of our anæsthetizing fluid with the lower branches of the cervical plexus going to form the three groups of supra-clavicular sensory nerves.

The second case which I deem worthy of a more detailed report is as follows: Male, 26 years of age, gunshot wound of left arm. He had been shot at rather close range with birdshot about three weeks before I saw him. His left arm in the region of the elbow externally had received the bulk of the load, and the skin over this region was literally covered with shot holes. Examination revealed a complete motor paralysis of the group of muscles supplied by the musculospiral nerve, with typical wrist-drop. The diagnosis, of course, was a severed musculospiral. Under brachial plexus anæsthesia by the usual technique, a curved incision about six inches in length was made through the skin on the outer and anterior aspect of the arm, directly over the supinator longus muscle. The supinator longus was reflected outward and the musculo-spiral nerve dissected out for three inches. The nerve was found to have been cut, and the ends were enveloped in scar tissue. With some difficulty the ends of the nerve were freed. united end to end, and surrounded by a fat flap made into a cylinder. The skin was closed, and the arm put up in mid-flexion. The time consumed by the operation was forty-five minutes. There was no pain at all and the only subjective symptom referred to by the patient was the consciousness of muscular twitching in the extensor group of muscles as the distal end of the severed nerve was handled. This case could hardly have been done with any other kind of anæsthesia save general narcosis. As it was, he walked to and from the operating room, was perfectly comfortable at all times, and was never confined to bed.

There have been no toxic symptoms from the use of the drug. The usual limit to the amount of novocain which can be safely used at one time is placed at fifteen grains. A fraction over six grains is contained in the 20 c.c. of 2 per cent solution which we use. There is no increased after-pain which is frequently one of the annoying after results of local infiltration anæsthesia. I

know of only one reported case with any deleterious after effects, and that was one of temporary neuritis, lasting a few weeks.

The only anatomical structure of any consequence, which it is necessary to avoid injuring, is the subclavian artery, which is easily felt and avoided. Even though a fine needle did enter it, no harm would result. The pleura will not be injured, of course, if the point of the needle is not made to pass the first rib.

In conclusion, I wish to commend the procedure as one which is simple, safe, easy of accomplishment, requires no assistants, is painless, and gives a most satisfactory grade of anæsthesia.

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REMARKS ON THE SURGERY OF HEMORRHOIDS.*

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Probably every surgeon has his own way of treating hemorrhoids. In the remarks that follow my aim is simply to present some of the methods that have proved best in my experience, and my reasons for these conclusions.

There are three classical methods of operating for hemorrhoids. These are the clamp and cautery, ligation, and the Whitehead operation. The clamp and cautery is certainly the most popular, and is certainly the simplest and quickest. This method has never been a favorite with me. I had one case of severe hemorrhage when using it, following a slough. It has seemed to me that there is always a good deal of sloughing in this method, with the formation of raw areas which heal slowly, and it is quite as painful as either of the other.

With regard to the Whitehead operation, it seems to me to be unnecessarily severe. It takes longer than other methods and the amount of blood lost is always considerable,

at least in my experience. The great objection is, however, that there is always liability of sloughing of some of the sutures with the formation of raw areas and tendency to constriction. Harvey Stone in reviewing 470 cases from the Johns Hopkins Hospital where the technique is probably as good as anywhere mentions a granulating area of greater or less extent in 106 cases.

I have come to use just two methods in treating hemorrhoids—ligation and Earle's modification of the Whitehead operation. Hemorrhoid cases fall into two great groups, depending upon the condition of the hemorrhoid-bearing area. In the first group the hemorrhoids form separate and distinct tumors with the intervening mucosa healthy or nearly so. In the second group the whole mucosa appears varicose and to demand correction.

In the first group the operation that has given me the most satisfaction is ligation of each hemorrhoid in turn. The mucocutaneous border is incised and the hemorrhoid dissected back to its pedicle and this clamped and tied with catgut. The incision is then sutured with interrupted catgut sutures transversely to the lumen.

In the second group of cases I use Earle's modification of the Whitehead operation, using Hebb's clamp instead of Earle's. This clamp is simply a right-angled clamp with a compensatory curve to adapt it to the lumen of the rectum. The mucous membrane to be removed is caught up in the clamp, cut off, and then one runs a catgut suture over and over the clamp. On withdrawing the clamp the suture is drawn tight and tied.

About three applications of the clamp suffice to encircle the rectum. Bridges of intact mucous membrane are left between the applications of the clamp to act as supports against retraction. The line of suture is, of course, transverse to the lumen of the gut.

I am one of those who believe in inserting a small rubber tube wrapped with iodoform into the rectum after operating.

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

A word about local anæthesia in hemorrhoid operations. I have operated now eleven times under local anæsthesia with perfect satisfaction. The solution used is $\frac{1}{2}$ of one per cent with suprarennin. 150 c.c. are necessary. No preliminary hypodermic is given. The skin over the external sphincter is first anæsthetized in a circle about the anus. I use for this a small glass hypodermic syringe and needle. The needle is then plunged into the sphincter about 1/2 inch deep at five or six points to paralyze and anæsthetize the muscle. I then use a 30-c.c. all-metal syringe with a 19gauge needle and inject the perirectal tissue at four points inserting the needle both straight and obliquely for a depth of about three inches.

When using this method I have never had any trouble in the dilatation of the sphincter. The patients complain of no pain, nor of any in the subsequent manipulations. I would not advise this method in the presence of perirectal infection for fear of spreading the infection with the needle, but I have had no infection from the injection of the solution.

After novocain anæsthesia the wound always pains more or less starting about six hours after operation. It generally calls for a hypodermic of morphine which is never withheld and is repeated if necessary. However, I do not know that there is more pain after novocain than after general anæsthesia. Most of my patients with either method get one or two hypodermics.

THE SURGICAL TREATMENT OF PROLAPSE OF THE UTERUS.*

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In preparing a paper on this subject one, from the start, is brought face to face with two facts—(1) that there is no general

agreement among surgeons as to the best surgical procedure for its relief, and (2) that, in spite of the earnest efforts of our best gynecologists, we are constantly reading reports of the failure of or dissatisfaction with the present surgical measures for the correction of this, the most troublesome of hernias.

I use the term hernia in this connection advisedly, for to my mind, this condition is as truly a hernia as a ventral hernia of the viscera following an interruption of the continuity of the normal abdominal wall. In most instances this condition follows a true disastasis of the levator and muscles from laceration at childbirth in combination with a laceration of the fascia which supports the bladder, and it is brought about by a series of vicious concomitants to the lacerations.

The normal position of the uterus is one of anteversion in which position it is maintained by the backward pull of the uterosacral ligaments working against the forward pull of the round and utero-vesical ligaments in much the same manner that a pessary is held in the vagina. In addition to these main supports, it gets support also from the cardinal and broad ligaments. Its position varies with the state of the bladder and intra-abdominal pressure. As the bladder fills the uterus becomes retrocessed and as it empties the uterus follows it towards the pubis where it is held in position by its ligaments, by gravity and intra-abdominal pressure. Weight for weight the uterus has more ligaments than any other organ in the body. These supports are strong, the round ligaments alone, by actual test, being able to sustain a weight of from eight to eleven pounds. I concur with Goffe in the contention that the uterus is supported entirely from above by its ligaments and gets no support from the perineum. To my mind this latter statement is most conclusively proven by the fact that in event of complete laceration of the perineum

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

through the sphineter it is the rule that the uterus remains in position, providing there is no intra-abdominal condition, such as a ous tube or a tumor which would cause a misplacement. I have personally operated upon but three cases of complete laceration through the sphincter, one of five years' duration, one of three and a half years' duration and one of two years' duration, and in each case the uterus was in normal position. It has been my privilege to see several others in my internship and I have yet to see a case of uncomplicated third degree laceration in which the uterus is in a malposition. I have a case of third degree laceration under observation at the present time. The patient received her laceration two years ago today and in spite of frequent examinations 1 have at no time been able to find her uterus in any but normal position.

In view of these statements the question very naturally arises, if the uterus gets no support from the perineum why then does it become necessary to repair the perineum in order to get a permanent cure of a retroversion or prolapse. We all recognize the fact that we must repair the perineum to get a result. The question is a fair one and is easily answered. Laceration of the perineum in any degree except complete becomes a true diastasis of the levator ani muscles with an attendant rectocele which is a true hernia of a portion of the rectum into the vagina. With every bowel movement, cough, sneeze, or strain of any nature this hernia protrudes into the vagina. This pushes the posterior vaginal wall out at the introitus and directly causes a pull at its attachment at the cervico-vaginal junction. The constant repetition of this pull eventually pulls the uterus over into a position of retrodisplacement and when it remains chronically in this position it becomes an easy matter for misdirected intra-abdominal pressure to push it out at the vulva providing there are no adhesions holding it up. This series of events in combination with prolapse of the bladder completes the vicious circle which causes retrodisplacements and eventually prolapse.

One of the most troublesome symptoms, if not the most troublesome in partial or complete prolapse, is the irritability of the bladder due to the cystocele. With the prolapse of the bladder we find that the trigone, instead of being spread out as an equilateral triangle which is practically on a level with the urethra, has sagged downward into a cup-shaped depression which is considerably lower than the mouth of the urethra and in consequence the bladder is unable to empty itself completely. There is a retention of a certain amount of urine in this depression with resultant decomposition of urine and concomitant trigonitis and cvstis. Frequency of urination tenesmus become annoying symptoms and involuntary loss of urine on sudden muscular exertion is not an uncommon symptom, due to the loss of tone of the sphincter. As a rule the patient comes to the office seeking relief from bearing down pains and bladder trouble and the amount of trouble usually varies in direct proportion to the amount of the cystocele. In consequence of this fact almost all the operations for this condition have been built around a eystocele operation as a foundation and the success or failure of your operation usually depends upon whether or not you have relieved the cystocele.

We have almost as many operations for this condition as we have for retroversion, and our most difficult task is that of selecting the best operation for the individual case. This calls for a careful examination of your patient. Many women claim to have a prolapse and will swear that their uterus protrudes from the vagina when they have only a cystocele or a rectocele, or both, and in some cases all we can find is an elongated cervix. One should examine

every patient in the standing posture to appreciate the amount of prolapse.

In going over the literature I find that the Watkins operation of interposition and the Goffe operation of vaginal hysterectomy with his cystocele operation in conjunction are the most favored of all operations by the better surgeons. I believe, however, that ventral suspension is done more often for this condition than any other one operation. The latter is the worst sort of a makeshift and is done largely by unprepared surgeons and by those men who will not attempt to cope with the more extensive operations either through laziness or fear. I cannot condemn this procedure too strongly.

The Watkins operation has more supporters than any other because it does give relief in a large percentage of cases by getting rid of the cystocele. To my mind it is the most unanatomical operation of any of those suggested which are of any practical value. Watkins himself reports 104 cases heard from out of 275 operated upon. Of these he had recurrence of the prolapse in 13 of the 104 heard from or 12.5 per cent. Novak reports 16 heard from out of 26 operated upon with one failure or 6.25 per cent failures. Polak reports 5 failures out of 82 operated upon or 6.1 per cent failures. All report bladder irritability following operation for weeks. Polak says colon pyelitis follows immediately in some cases and in three cases he met with intractable vesical irritation. Trigonitis followed in nearly half of Polak's cases to such an extent that it became necessary to treat it locally. Dyspareunia is a common complaint, following this procedure.

The Goffe operation of vaginal hysterectomy with repair of the cystocele after his method is the operation par excellence in selected cases. In cases of complete decensus, and in cases in which you have uterine atrophy and atrophy of the levators this operation will give complete relief

where no other will. It is a very extensive operation, but you do not get recurrence while you do get complete relief of symptoms if the operation is properly done. I always do this operation in women at or near the menopause if there is any atrophy of the structures and where there is a complete decensus.

In all other cases I do an operation for which I claim no originality further than the arrangement. I know of no other man who is doing this operation as I do it and while you do get complete relief of symptoms limited I believe it to be a good operation which is absolutely anatomical and will give you absolute relief if properly performed.

The function of any surgeon is to remove diseased tissue and restore the parts to as nearly their original anatomical perfection as possible. I have described the uterus as being supported by its ligaments and held in proper anatomical position by the backward pull of the utero-sacral ligaments against the forward pull of the uterovesical and round ligaments. In this operation I take advantage of that knowledge and use the operations devised by Coffey and Jellett to attain these ends. I have described the bladder as being suspended from the anterior face of the uterus and held up by the fascia in front of it. I take advantage of this knowledge and use the operations devised by Goffe and Hirsch to replace the bladder as it was and hold it in place. I have explained that the perineum must be repaired to obtain a permanent result and I repair it after the manner described by Sturmdorf. It is absolutely essential that in repairing a perineum you should approximate the levator ani muscles in the median line beneath the vaginal floor to prevent recurrence of the rectal hernia.

While this operation requires rather extensive dissection there is no more than in the Watkins or Goffe operations in the neighborhood of the bladder, and while there is a bit more dissection about the curvix it takes but a few moments more and is in a region that causes no further shock to the patient.

The first step is the dissection of the anterior wall and in this I follow my teacher, Dr. Goffe. Dragging the cervix well down with a heavy Segond tenaculum forceps, make two lateral incisions on the

the angle of your incision in the anterior wall with a forceps and dissect the bladder free from the anterior wall in its entirety up to the urinary meatus. This is most easily done with a Goffe spud. Your bladder is now free and hangs supported only by its attachment at the meatus urinarius and by the ureters. Split the anterior wall

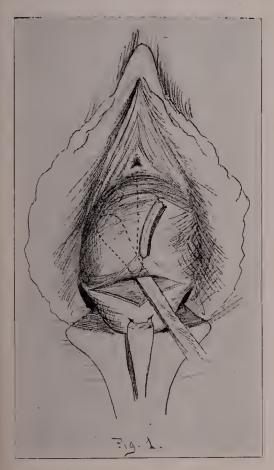


Fig. 1. The bladder has been dissected free from the uterus and is being dissected free from the anterior wall.

anterior lip of the cervix just below the bladder fold which meet in the median line to form an obtuse angle. Reaching the anterior wall of the uterus through this incision dissect the bladder off the anterior wall back to the peritoneal reflection. This is very easily and best done with the finger covered with a layer of gauze. Having freed the bladder from the uterus, grasp

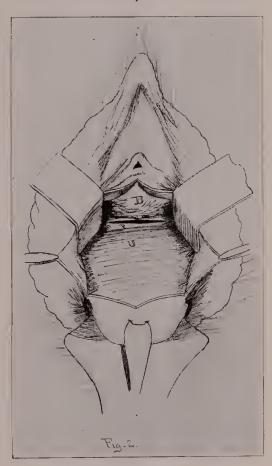


Fig. 2. The bladder has been dissected free from the anterior wall and uterus and the peritoneum opened.

from the apex of your original triangular incision to the meatus urinarius and when the flaps are held back by retractors and the bladder held up by an anterior retractor your utero-vesical fold of peritoneum is exposed to view. This is grasped with a forceps and cut with the scissors admitting you to the peritoneal cavity. By inserting the two index fingers into this opening,

placing them back to back, and pulling them apart you will very easily enlarge your incision to sufficient size and it will tear practically in a straight line along the uterine attachment of the peritoneum.

The uterus is now delivered into the vagina by pushing backward on the cervix and dragging the fundus forward with a Now the bladder is restored to its proper anatomical position after the method devised by Goffe. The bladder is picked up at a point a sufficient distance away from the meatus so that when it is stitched to the anterior face of the uterus it will make a straight line from the meatus to the uterine attachment.

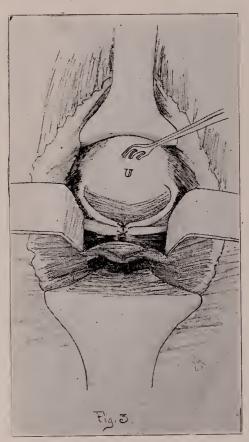


Fig. 3. The fundus has been dragged into the vagina with a catspaw and the round ligaments shortened.

catspaw and the adnexa examined and treated if necessary. The round ligaments are then grasped with forceps and shortened with linen after the manner of Coffey, plicating them and suturing them to the anterior face of the uterus just be low their origin. The peritoneal incision is now closed with a purse string suture of plain gut, closing the bladder leaf on the anterior face of the uterus above the ligamentous attachment.

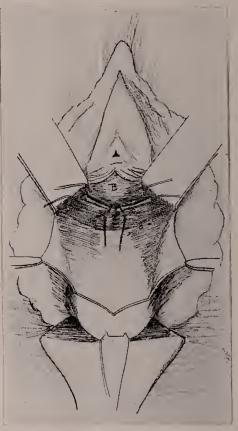


Fig. 4. The bladder is being stitched to the fundus between the round ligament insertions. Stitches in place but not tied.

Two other points are chosen in the same lateral plane and equidistant from the first point and three linen sutures inserted. These three sutures are then placed in corresponding points on the anterior face of the uterus just over the sutured plications of the round ligaments and tied. This restores for us the triangular trigone of the bladder floor and puts it on a level with the meatus so that the bladder can be completely emptied.

The next step is the closure of the fascia

in front of the bladder after the manner described by Hirsch in his operation for cystocele. It is closed with interrupted sutures of chromic No. 2 bringing it snugly up against the base of the bladder. The last of these sutures goes through the anterior face of the uterus just at the lower point of the vesico-vaginal attachment effec-

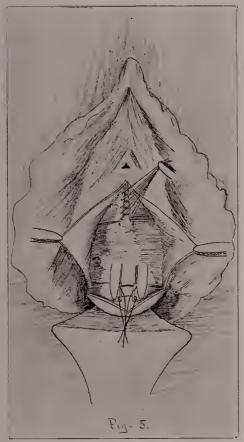


Fig. 5. The lateral fascia is being closed in front of the bladder and the ntero-sacrals are being united anterior to the cervix.

tually closing any hernial opening for the bladder to slip down through beneath the suture line. The redundant mucosa of the anterior wall is then trimmed away and the longitudinal incision closed with a continuous suture of No. 2 chromic gut.

Our next step is the vaginal shortening of the utero-sacral ligaments after the method described by Jellett to give us the counter pull and support below. With your

first heavy traction on the cervix at the beginning of the operation you will feel the utero-sacral ligaments stand out from the posterior lip of the cervix like guv ropes. Make a small incision over them and dissect them free from the posterior cervical lip and put a clamp on each one. After your longitudinal incision in the anterior wall is closed these clamps can be picked up and after dissecting the mucous membrane free from the cervix drag them around in front of the cervix and stitch them together and to the cervix on its anterior lip forming a sling the pull of which is downward and backward throwing the cervix into the hollow of the sacrum with the os perpendicular axis of the vagina. At this stage of the operation the cervix may be amputated or repaired if the case demands. If not the two primary incisions are closed and we are through except for the perineorraphy.

The perineum is repaired after the manner of Sturmdorf with a free dissection of the mucosa of the posterior wall to the highest point of the rectocele. The levators are then dissected out and approximated in the median line with interrupted sutures of chromic No. 2. The ragged edges of the mucosa are trimmed and approximated with a continuous suture of chromic No. 2. The skin is closed with two or three silkworm gut sutures which go deep enough to include the muscles.

A rubber tissue drain is left under the flap in the anterior wall for 24 hours and a piece of iodoform gauze in the vagina for three days. As soon as the gauze is removed the patients are given B. L. D., douches of saline at a low pressure and at a temperature not over 100 degrees. They are allowed out of bed on the tenth day. They usually void within 24 hours.

In summary:

1. This operation seems to me to be as near to perfect anatomical readjustment as it is possible to get and achieve the result.

- 2. It is applicable to any case of uncomplicated prolapse except where the structures are atrophied and in this case the Goffe vaginal hysterectomy with suture of the bladder on the top of the plicated broad and round ligaments should be the procedure of choice.
- 3. The necessity of a good perineorrhaphy with approximation of the levator ani should be emphasized.
- 4. The Watkins' operation necessitates sterilization. This operation does not interfere with future pregnancies.
- 5. Ventral suspension does not cure prolapse.

I have one case operated upon June 10, 1913, who has had one child since and who, when seen November 25, 1914, five months after the birth of the child, had no return of the trouble whatsoever.

I have nine other cases from two years to one month post-operative without recurrence of symptoms or pathology. My last case is thirteen days post-operative. She voided in 24 hours and when examined two days ago had a small pus pocket between the vaginal mucosa and the fascia containing about an ounce of pus which gave her a trigonitis, but curiously enough she ran no temperature. Aside from the infection which is my first she seems to have a good anatomical result.

I wish to acknowledge my indebtedness to Dr. J. Knox Simpson for the drawings he so kindly made for this paper.

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NOTES ON THE DIAGNOSIS OF INSANITY.

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One duty of the physician is to give some thought to the often difficult task of differentiating the same from the insane. Not only is the diagnosis of insanity necessary to relieve families of insane and unmanageable members, but also to throw light upon the causation of crime and upon the competence of witnesses, testators, and the like.

Two types of insanity are recognized the legal and the medical. To be legally insane one must be demonstrably unfit to transact business affairs or handle property with a reasonable degree of judg-

The medical (or psychiatrical) concept of insanity is broader. It is based upon the principle that a normal mind is able properly to adjust the individual to changes and conditions of environment; and that such adjustment is sufficient to protect the individual from undue harm, either direct or indirect. For example, a sane man of good vision who finds himself in the path of a runaway team is easily able to adjust himself safely to the situation by stepping aside. Similarly a normal individual in a jewelry store may see highly desirable and attractive articles within reach and may feel an impulse to acquire

them; but, realizing the harm to himself that would result indirectly from misappropriation of these things, is easily able to overcome the impulse and thus adjusts himself properly to the situation. On the other hand, the insane person is unable to adjust himself to the everchanging strains, problems and circumstances of the world about him.

It is apparent, then, that one may be legally sane yet medically insane, and it would be easy to point out persons obviously unbalanced who are successful in business or brilliant in achievement.

The fact that insanity is not one disease but a large group of diseases makes the diagnosis of mental aberration correspondingly difficult. There is as much difference, for instance, between involutional melancholia and paresis as there is between pneumonia and measles. Nevertheless, just as there are broad and unmistakable differences between health and disease, there are correspondingly unequivocal differences between sanity and insanity.

Named in order of importance the chief symptoms of insanity are (1) hallucinations, (2) delusions, and (3) change of personality.

Hallucinations may be defined as imaginary perceptions—perceptions occurring without the incidence of external stimuli. For example, a paranoiac hears accusing voices when no one is within earshot; and the victim of delirium tremens sees animals vividly which have no existence in reality. When the physician can be sure that the patient is hallucinating he may safely base a diagnosis of insanity upon that fact alone. Sane people do not experience hallucinations. Auditory hallucinations are more common and important than are the visual, olfactory or gustatory. In a personal statement to the writer, a former director of the Manhattan State Asylum, said that auditory hallucinations constitute the most reliable single diagnostic sign of insanity.

Hallucinations may assume a variety of forms such as the hearing of imaginary music, the seeing of visions, and so on. But it is best in the examination to lead into the matter by asking the patient whether he suffers from ringing in the ears or hears unusual sounds. Following this he may be asked if he hears voices now and then that are hard to account for, and then he may be asked what the voices say. Similarly with visual hallucinations it is well to inquire first about spots floating before the eves and gradually lead up to visions and the like. Hallucinations of taste and smell are comparatively rare and are of little importance in the diagnosis of insanity.

Delusions are simply wrong judgments, and are not necessarily signs of insanity unless they are what we call "insane delusions." Every normal person is a prey to ordinary delusions many times a day. For instance, when we call upon a friend who is not in, we are laboring under the delusion that he is in. Likewise the hopeful physician who looks forward to collecting twenty-five per cent more money next month than last is likely to find himself deluded. Insane delusions, on the other hand. are obviously absurd. As, for example, when a patient imagines that he is the Holy Spirit, Napoleon, or a Welch rarebit. Among the more common delusions is the delusion of persecution, the patient believing that certain imagined enemies are seeking his life, property or happiness. This type of delusion is common in the psychosis known as paranoia. Another frequent delusion is that of having committed the "unpardonable sin," and is often encountered in cases of manic-depression insanity during the melancholic phase, and in cases of involutional melancholia. The delusion of marital infidelity is commonest in insanity following long indulgence in alcohol; while delusions of great wealth are indicative of paresis.

One of the most reliable indications of insanity is change of disposition and personality. If it can be shown that the patient's present disposition and conduct are markedly different from his previous disposition and conduct we are forced to conclude that there has been a change in his mentality. A line of conduct that might be perfectly sane for one person would be insane for others. Moreover, we have to take into account the situation in life, age, training and environment of the patient before we are justified in saying this or that conduct is abnormal. Obviously, behavior which would be perfectly natural in a carefree, irresponsible negro laborer would be decidedly unnatural on the part of, let us say, a supreme court judge. Likewise, what would be normal in a child would, of course, not be normal in an adult.

The feigning of insanity is a thing that the physician must be on his guard against. There have been cases reported in the literature which gave eminent alienists trouble. One celebrated case was that of a newspaper reporter who feigned insanity in order to gain admittance to a certain Pennsylvania asylum that he wished to write up from the inside. The reporter in question had evidently studied the particular psychosis with which he was pretending to be afflicted. As a rule, however, those criminals who malinger to escape punishment are not sufficiently versed in psychiatry to act out successfully any special form of insanity. Such patients may be easily trapped if put through a rigorous mental examination or if watched unobserved. An interesting case was that of Robert Clay of Atlanta who refused to speak for several months and who thus defied mental examination. He was caught unawares, however. when he complained once of the food given him, but even if he had not been so caught, he would still have been adjudged sane because refusal to speak is not an accepted symptom of any form of insanity. A malingerer in a western prison not only indulged in abnormal conduct but refused to speak until the physicians pretended to diagnosticate brain tumor and placed him on the table preparatory to opening his skull. Just before the anæsthetic was begun, however, he sat up suddenly and said, "I give in, gentlemen; there is nothing wrong with my brain."

For examining a patient thought to be insane the following plan is suggested: Investigate (1) family history, (2) personal history, (3) history of the psychosis, itself; then make a physical examination, including an interrogation of the principal reflexes, special senses and motor functions, and finally conduct a mental examination.

Mental examinations should include a study of the patient's manner, speech, flow of thought, emotional tone, power of attention and retention, orientation for time, place and persons, memory of the immediate and remote past, power of calculation, ability to read and write and insight, mental and moral.

A simple test of attention and retention is to require the patient to repeat numbers of six or seven numerals after the examiner, as, for instance, 6927453. Orientation for time may be tested by asking the patient the day of the week, month, etc., while orientation for place and person is tested by asking the patient where he is and who are the people about him. Memory for immediate past may be examined by inquiries regarding what the patient did on the day before examination or during the past several weeks, and for remote events by questions concerning his childhood and historical facts learned at school. Simple sums in multiplication, etc., are generally used to test the power of calculation. The patient's power to write should be investigated by dictating several sentences while his moral insight may be gathered from answers to such questions as: Why is it wrong to steal? What would you do if you saw a man unknowingly drop a ten dollar bill on the street? and so on. Finally, insight into his mental condition may be tested by asking the patient direct questions concerning his view of his own equilibrium.

In conclusion let it be remarked that my purpose in presenting this paper has been merely to offer a few practical suggestions relative to the diagnosis of insanity as a whole, no effort being made to enter the large field of differential diagnosis of the several psychoses.

Finally, let it be said that there is no hard and fast line of demarkation between sanity and insanity, that many forms of insanity are transient, and that under stress of circumstances the best of us may momentarily lose our psychic equilibrium once in a while.

603 Candler Building.

PROPAGANDA FOR REFORM.

THE CONVERSE TREATMENT.—This is a Columbus, Ohio, epilepsy "cure." An examination in the A. M. A. Chemical Laboratory showed that each 100 c.c. contained 7.3 gm. ammonium bromide, 5 gm. calcium bromide and 8.7 gm. potassium bromide, the bromide content being equivalent to 14.5 gm. potassium bromide per fluidram (one teaspoonful). Despite this bromide content the exploiters have in the past stated the epilepsy cures containing bromides "tend to aggravate the trouble in the long run." (Jour. A. M. A., April 24, 1915, p. 1441.)

THE SOY BEAN.—The soy bean is of medical interest: (1) because it contains the enzyme, urease, which converts urea into ammonia and carbon dioxide and hence is used to estimate urea in urine; and (2) because soy bean products have been recommended as foods for diabetics. Street and

Bailey of the Connecticut Agricultural Experiment Station, report that although the soy bean contains about 25 per cent total carbohydrates, only about 8 per cent composed of sugar, starch and dextrin, may be considered objectionable in a strict diabetic diet. Thus the sugar-forming carbohydrates contained in soy beans fall well within the limit of 10 per cent regarded as safe for diabetics. (Jour. A. M. A., Oct. 16, 1915, p. 1372.)

Some "Patent Medicines" for Exter-NAL APPLICATION.—The following statements of composition is indicated by the reports of various state boards of health, the government chemists and the A. M. A. Chemical Laboratory: Amarol, a "complexion beautifier," is composed of Epsom salt 95 per cent and borax 5 per cent. Anti-Freckle Lotion (Gustin's) contains mercuric chloride 1.5 per cent, alcohol 2 per cent and water 96.5 per cent. Calocide, for "foot trouble," is sodium chloride 22.44 per cent, borax about 37.58 per cent, alum about 39.35 per cent, tannin small amounts. Cerol. which "cleans and clears the skin," is boric acid, stearic acid and perfume. Clearola, which will "whiten the skin," is sulphur. Cuticle Acid, to "remove dead skin," is alcohol 10 per cent and oxalic acid? per cent. Derma-Royale for skin affections is a dilute alcohol-glycerin solution with small amounts of camphor, myrrh, benzoin and possibly other aromatics in suspension. Eptol, a wrinkle remover, is essentially borax 37 per cent, soap and stearic acid 63 per cent. Fatoff was found to be essentially soft soap. Gloriol Balm, a vanishing toilet cream, is composed of stearic acid, soap and borax 23.7 per cent, water 76.3 per cent. Gloriol Glowene, said to be a substitute for soap, is soft soap. Zemo, for eczema. pimples, dandruff and similiar affections, appeared to be a watery-alcoholic solution containing methyl salicylate, thymol, borax, tannic acid, glycerin, menthol and a phenolpp. 1365-7.)

Somnoform.—This was originally composed of ethyl chloride 60 per cent, methyl chloride 35 per cent and ethyl bromide 5 per cent. Now it is said to contain but 1 per cent ethyl bromide. Like ethyl chloride Somnoform has been used as a substitute for nitrous oxide before ether anæsthesia and for short operations, but has been mostly used by dentists for extractions. It is doubtful if the mixture has any advantage over ethyl chloride. The mortality is less than that of chloroform, but twice that of ether and four times that of nitrous oxide. (Jour. A. M. A., Oct. 16, 1915, p. 1391.)

IODUM-MILLER.—The A. M. A. Chemical Laboratory reports that Iodum-Miller was found to be essentially a solution of iodine and potassium iodide in glycerin containing 1.68 per cent of free iodin. The Council on Pharmacy and Chemistry reports that Iodum-Miller was not eligible for New and Nonofficial Remedies because incorrect statements are made in regard to its composition; because unwarranted therapeutic claims are made for it; and because the application of a trade name to a simple solution of iodin is not to be countenanced. (Jour. A. M. A., Oct. 2, 1915, p. 1202.)

lop-Izp-Oh. (Miller's). — Analysis in the A. M. A. Chemical Laboratory indicated Iod-Izd-Oil (Miller's) to be a simple solution of iodin in liquid petrolatum containing, not 2 per cent of iodin, as claimed, but only 0.42 per cent. The Council on Pharmacy and Chemistry found the preparation incligible for New and Nonofficial Remedies because the composition is not correctly stated and because the application of a trade name to a simple preparation of this sort is irrational. (Jour. A. M. A., Oct. 2, 1915, p. 1202.)

HEXA-CO-SAL-IN. — Hexa-co-sal-in (Hexa-Co-Sal-In Company, Red Bank, N. J.) is advertised as "a condensation product of 'familiar composition" and that it is "colchi-magnesium salicylate with anhydrous hexamethylenamin." An examination made

by the A. M. A. Chemical Laboratory showed that Hexa-co-sal-in is a simple mixture of hexamethylenamin, magnesium salicylate and some colchicum preparation. The Council on Pharmacy and Chemistry reports that the statement of the composition of this preparation is false; that unwarranted therapeutic claims are made for it and that the mixture is unscientific. (*Jour. A. M. A.*, Oct. 2, 1915, p. 1203.)

LANATIVE BROMO QUININE. — From the analysis of the A. M. A. Chemical Laboratory it appears that each tablet of Laxative Bromo Quinine contains, as essential ingredients, phenacetin about 2 grs., caffein 1-5 gr., quinine or cinchona alkaloids 2-5 gr. and aloin or aloes. While the name gives the impression that bromine and quinine are the important ingredients, the bromide content corresponds only to 1-500 part of a pharmacopæial dose of potassium bromide. In order to get a pharmacopœial dose of quinine, it would be necessary to take ten Laxative Bromo Quinine Tablets. If this were done, the person would get twenty grains phenacetin, a dangerously poisonous dose. As phenacetin is the essential ingredient of Laxative Bromo Quinine it is evident that this widely-exploited nostrum is misbranded. (Jour. A. M. A., Nov. 27, 1915, p. 1932.)

lopeol and Iodagol.—Both appear to be iodine preparations. They are advertised as "Electro-Chemical Colloidal Iodine." Iodeol is recommended as "Iodine with all its potentialities—stripped of all its drawbacks—non-irritating, non-caustic, non-toxic, non-cumulative, injectable without pain." No adequate evidence is offered in support of the therapeutic claims made for Iodeol and Iodagol, although the assertions as to the action of Iodeol in tuberculosis and pneumonia, in particular, are susceptible of test by laboratory and animal investigation. (Jour. A. M. A., Nov. 27, 1915, p. 1935.)

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MEDICO-MILITARY PREPARED-NESS.

The military efficiency of an army is entirely dependable upon the health of the soldier unit. An army of one million men with disease spread throughout ranks may soon become a military liability instead of an asset. The cry of the present day is "preparedness" and is it not especially mandatory upon our legislators to see that medico-military preparedness be not lost sight of in our national defense program? It is a matter of history that in the past the armies of the world have been inadequately provided for from a medical standpoint. The lessons of our own Civil War were forgotten in the era preceding the Spanish-American War. We are now on the verge of military preparedness. The administration in Washington has announced its plans for increasing our military and naval organizations. The various units of these organizations can not be maintained at their highest point of efficiency unless they are adequately provided with medical officers. The Journal wishes, therefore, to call its readers' attention to a duty that should not be carelessly left for the other fellow to take care of. The following letter from Dr. W. L. Rodman, President of the American Medical Association, addressed to the President of our state organization, Dr. R. H. McGinnis, together with the set of resolutions adopted by the Southern Medical Association, at the Dallas meeting, is selfexplanatory:

"Dr. R. H. McGinnis,

"Jacksonville, Fla.,

"Dear Doctor:

"I am enclosing a copy of a resolution which was enthusiastically passed by the Southern Medical Association at its meeting in Dallas, Texas, November 8-11, 1915. The resolution explains itself.

"Would you be kind enough to mail a copy of it to every county and other medical society in your state for adoption and ask those societies in localities in which members of Congress or the Senate reside to have this subject especially brought to their attention by individuals or committees who may have personal acquaintance with said legislators? Congress meets very shortly; there is but little time left and any action on your part should be prompt. In those instances where the congressmen have left home the appeal should be made by mail. Will you also please ask the journal of your society to make editorial comment on the matter in their next issue?

The measure to be proposed this winter looking to military preparedness makes no attempt to provide the soldiery with sufficient medical attendance in a crisis, or in peace, for that matter. No class of men is better fitted to pass upon the number of medical officers necessary to treat and keep in health a given number of men as the doctors of the country are. In these days of preventive medicine, thorough knowledge of the etiology of disease and the precise methods of care of the sick and wounded, armies have to be entrusted to specially trained medical men; otherwise casualties from avoidable diseases and lack of the proper treatment of the injured become very great. In the end, the state is apt to suffer unduly in the matter of pensions and the young and vigorous manhood of our country to be sacrificed.

"Hoping you will put your shoulder to the wheel and that your efforts will bring good results, I am

"Sincerely yours,
(Signed) "W. L. RODMAN."

COPY OF RESOLUTIONS PASSED BY
THE SOUTHERN MEDICAL ASSOCIATION AT DALLAS,
TEXAS, NOV. 8-11, 1915.

"WHEREAS, The President and the Honorable Secretary of War have announced in the public press that a scheme for the reorganization of the army will be presented to Congress at its coming session, which

will materially increase the military establishment, and

WHEREAS, We recall the indignant protests and criticsms of the nation at the failure to provide adequately for the sick and wounded at the beginning of the Civil War and the Spanish-American War, and

WHEREAS, It is known that this failure was due to the lack of a sufficient number of medical officers in the regular army and a means for increasing the medical establishment at the outbreak of the war, and

WHEREAS, In spite of the lessons of the Spanish-American war, which were fresh in mind in the reorganization of the army in 1901, the Medical Department was not properly increased and no provision was made for its expansion in time of emergency, and

WHEREAS, To correct the defects in 1901 legislation, subsequent legislation was necessary in which the medical profession of the United States was called on to assist;

Therefore, be it resolved, by the Southern Medical Association, in session at Dallas, Texas, That the Secretary of War be petitioned to make adequate provision in the reorganization of the army about to be presented to Congress for a sufficient number of medical officers for the regular establishment, which provision should aggregate a proportion of medical officers of at least seventy-five hundredths of one per cent of the enlisted strength of the army, or such number as the Surgeon General of the army may deem necessary, and

Be it further resolved, That the Secretary be petitioned to make provision in this reorganization for the expansion of the Medical Department at the beginning of war by calling into service in the Medical Reserve Corps physicians from civil life who have been instructed in their special duties as medical officers in our summer camps, and otherwise, as the War Department may see fit."

Copies of Dr. Rodman's letter and of

the resolutions have recently been sent to the Secretary of each County Medical Society, with an urgent appeal for action. The medical profession of the Union have a duty to perform; let the physicians of Florida be among the first to do what is in their power to insure our army and navy being provided with adequate and efficient medical organizations.

OSTEOPATHS AND THE HARRISON LAW.

"As anticipated, the federal government is having much difficulty in the administration of the Harrison law, owing to the fact that there is no uniform standard as to what constitutes the practice of medicine in the different states. Not only the definitions and provisions of the statutes, but also the decisions of various courts of last resort differ widely on this point. In some states, osteopathy is included in the practice of medicine; in other states, it is legally distinct. The dilemma of the Treasury Department is apparent from its conflicting rulings, Treasury Decision 2232, recently issued, revokes Treasury Decision 2172 and substitutes the following ruling: 'Osteopaths should be permitted to register and pay special tax under the provisions of the act of Dec. 17, 1914, provided they are registered as physicians or practitioners under the laws of the state and affidavit is made in application for registration on Form 678 as required by Treasury Decision 2215 of June 10, 1915.' This form is the one used by all physicians, and contains a statement sworn to by the applicant that he is practicing medicine at the time of making application. The intent of the Treasury Department in this ruling is obvious. If the ruling had provided for the registration of osteopaths in those states in which they are legally recognized as physicians, there would be no ground for criticism. The inclusion of the term 'or practitioners,' however, leaves the entire question open to argument. What does the Treasury Department mean by 'a practitioner?' This might include Christian Scientists, clairvoyants, seventh sons of seventh sons, and every other fad or form of quackery. Suppose osteopaths are allowed to register under the Harrison law. What of it?" asks *The Journal of the American Medical Association*. "Such registration will not give them the right to practice medicine, unless they are given this right by the law of the state. Registration under the Harrison law will not confer any right to practice medicine not given by the statutes of the state."

A SWINDLE IN AUTOMOBILE SUPPLIES.

"Have you been approached by a suave salesman who is willing to let you in on a ground floor proposition to obtain your automobile supplies at cost? If you haven't, you may be! He is abroad in the land, and physicians should look out for him. They are his special 'game.' A certain 'T. A. Buck' claims to be the representative of 'the Auto Owners' Service Company of Toledo, Ohio, and offers for \$10 a vellow paper certifying that the purchaser is a member of the Auto Owners' Service Co., and shall receive all automobile accessories and supplies which he may purchase from the said company at cost f. o. b. factory for one vear.' But the trouble is that neither the city nor telephone directory of Toledo contains the name of the concern or the name of T. A. Buck. Further, owners of public garages and other concerns of Toledo that ought to know say that no such company exists in that city. As one of our correspondents puts it, there have been 'several dozens' of such companies in Toledo, all of which border on the fraudulent.' Toledo, however, is not the only city that has been honored as headquarters for concerns that offer to furnish automobile supplies at less than cost. Physicians must be on the watch. There are reliable firms that furnish automobile supplies on favorable terms, but these, as a rule, do not have traveling men selling certificates of membership for cash. In any event, if contracts are to be entered into, let the company send the bill in the regular way. This will give time for investigation and cool thinking after the smooth-talking representative has departed, which is far better than doing the cool thinking after the cash has departed."—Jour. Am. Mcd. Ass'n.

THE TRAGEDY OF UNPREPARED-NESS IN MEDICINE.

"A recent number of a periodical published in the interest of osteopaths," says The Journal of the American Medical Association, "contains a number of references to the death of a boy from diphtheria. death from any cause and even one from diphtheria would not usually have caused so much comment, but this boy happened to be the son of the editor, who is an osteopath. The reports show that the disease was not recognized until a physician—a graduate of a Class C medical college—was called in, and he thought lobelia was better than antitoxin. The editor is now mourning the death of his son, regrets that antitoxin was not used, and has started a campaign among osteopaths urging the use of antitoxin in diphtheria. Pathetic as are the statements of this heart-broken father, they show unquestionably how slight was his knowledge of the simplest fundamentals of medicine. They show also that the admission to practice of any one who is tied down to a theory, a cult or a fad, who has not previously been trained in the underlying medical science, is a menace to the public." The Journal of the .Imerican Medical Association quotes a number of the statements contained in the osteopathic publication. It then continues: "The paragraphs quoted show the fallacy of the belief, which appears to be prevalent in some states, that an individual may be safely permitted to practice a single branch of

medicine, or make use of a single method of treatment, without first undergoing a complete course of instruction in the fundamentals of medicine. If the editor of the paper quoted, before specializing in osteopathic methods, had obtained a complete medical training, it would have enabled him not only to recognize diphtheria in its earlier stages and possibly prevent the death of his son, but also to understand why antitoxin has reduced the death rate in diphtheria 'from 50 per cent. to 10 per cent.' An important question—as far as the public is concerned—is: How many other children have lost their lives in his practice and in that of the thousands of others who have assumed the role of physicians, but who are unable to 'know a case of diphtheria if they saw it' or who can not 'understand' or do not 'believe in' antitoxin? And diphtheria is only one of the many diseases, contagious or otherwise, which for their most favorable treatment require a positive and early diagnosis. While urging other osteopaths to make use of antitoxin in diphtheria, therefore, this editor at the same time might well urge that all practitioners of osteopathy and other cults enter some good medical school and complete their medical training so they may give their patients the benefit of the researches of Pasteur, Koch, Klebs, Flexner and others, which have done so much to reduce the death rate from contagious diseases and saved untold thousands of lives by the prevention of epidemics. If the death of this small boy will lead to such a reform, he will not have died in vain."

ETHICS OF THE PHARMACIST.

THE JOURNAL is pleased to present to its readers the following Code of Ethics governing the Florida State Pharmaceutical Association, adopted at the annual meeting at Jacksonville, Florida, October 27, 1914:

The Pharmaceutical profession, being one which demands knowledge, skill and

integrity on the part of those engaged in it, and being associated with the medical profession in the responsible duties of preserving the public health and dispensing the useful, though often dangerous, agents, adapted to the cure of disease, its members should be united on the ethical principles to be preserved in their relation to each other, to the medical profession and to the public.

The Florida State Pharmaceutical Association, being an organization embracing among its members a large number of eminent pharmacists, manufacturers, chemists and scientists, being desirous that, in relation to professional conduct and probity, there shall be a corresponding disposition to advance, its members have subscribed to the following fundamental principles for the government of their professional conduct:

1st. We accept the United States Pharmacœpia as our standard and guide for all official prescriptions.

In compounding a prescription written in a foreign country, the Pharmacœpia recognized as authority in that country is to be followed. For unofficial preparations we advocate the adoption of uniform formulas in accordance with the National Formulary, or other standard works, published by national or international agreement.

2d. While, at present, the association does not feel authorized in requiring its members to abandon the sale of proprietary medicines, it earnestly recommends the propriety of discouraging their employment

3d. The apothecary should be remunerated by the public for knowledge and skill, and the charges should be regulated by the time consumed in preparation, as well as by the cost of the article sold. Although location and other circumstances necessarily affect the rate of charges at different establishments, no apothecary

should intentionally undersell his neighbors with a view to their injury.

4th. No apothecary should be engaged in furthering the interest of any particular physician to the prejudice of other reputable members of the medical profession. We emphatically condemn the allowance of and percentage on prescriptions to physicians as unjust to the public and detrimental to both professions.

5th. As the diagnosis and treatment of disease belong to the province of medicine, and as a pharmaceutical education does not qualify the pharmacist for the discharge of these responsible duties, we should, where it is practicable, refer applicants for medical aid to a regular physician. And we likewise hold that medical practitioners should recognize the value of pharmaceutical education and relegate the compounding of prescriptions and the dispensing of all medicines to pharmacists.

6th. As medical practitioners occasionally commit errors in their prescriptions which may or may not involve ill consequences to the patient if dispensed, and be injurious to the character of the prescriber. it is held to be the duty of the apothecary in all such cases to protect the physician and to have the corrections made, if possible without the knowledge of the patient, so that the physician may be screened from censure. When the errors are of such a character as not to be apparent, without the knowledge of the circumstances bevond the reach of the apothecary, we hold him to be blameless in case of ill consequences. As the original prescription is his guarantee, we recommend that it should always be retained by the apothecary.

Apothecaries, likewise, are liable to commit errors in compounding prescriptions, and we hold that in all such cases it is the duty of the physician to protect the interests of the dispenser, and stand between him and the patient, as far as possible,

7th. The apothecary should be able to distinguish between good and bad drugs, and as the substitution of a weak or inert drug for an active remedy may be productive of serious consequences, duty demands that he should exercise his expert knowledge and good judgment in the selection and preparation of remedies. We hold that substitution or the sale of impure drugs or medicines, when pure articles can be obtained, is highly culpable, and that it is the duty of every apothecary or druggist to expose all such fraudulent acts as may come to his knowledge.

8th. As there are many powerful substances that rank as poison, which are constantly kept by apothecaries and prescribed by physicians and which are only safe in their hands, we hold that the apothecary is not justified in vending these powerful agents indiscriminately to persons unqualified to administer them and that a prescription should always be required when intended for medicinal use. When the poisons are intended for technical purposes, or for the destruction of animals or vermin, the sales should only be made to responsible persons and strictly in accordance with the State law governing the sale of such poisons.

9th. While we recognize the value of spirituous liquors as therapeutic agents, and the necessity for pharmacists dispensing these legitimately in accordance with the physician's prescriptions, we condemn, as degrading and unprofessional, any attempt to make such sales a prominent feature of the business.

We discountenance any attempt to foster or increase the use of opiates or injurious drugs possessing the power of enslaving the consumer to habitual use.

We hold that where there is good reason to believe that the purchaser is habitually using stimulants, opiates or other injurious drugs, that we should discourage such practice by every means possible, and we urge upon pharmacists the duty of exercising at all times a conscientious care in dispensing drugs liable to such dangerous abuse.

10th. As pharmacy is a progressive profession, its followers should, by continuous study and application, keep abreast of the advances made in medicine and the sciences. It becomes our duty to encourage the elevation of our chosen profession by stimulating research, investigation and study.

Special care should be exercised in the selection of our assistants. No apprentice to the business of apothecary should be taken for a less term than four years, unless he has already served a portion of that time in an establishment of good character. Assistants, at the first opportunity, should be entered as students in a College of Pharmacy and encouraged to secure a thorough education. As the progress of our profession, in the scale of scientific attainment, must depend mainly upon those who are yet to enter it, it is recommended that those applicants who have had the advantage of a good preliminary education, including the Latin language, should be preferred.

Cancer Department

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

The Florida State Board of Health is preparing to lend its valuable and active cooperation to the spread of knowledge concerning the cancer problem.

Organized health crusades, under the auspices of state boards of health, are doing a wonderful and far-reaching amount of good toward conquering disease by prophylactic methods; and they therefor deserve, and should receive the active co-operation of every right thinking physician.

Our State Board of Health is equipping an exhibit train, presenting health problems in a clear, concise and convincing manner, to be taken to every town in the state. Every physician in Florida should feel it his duty to act as a personal advance advertising agent for this train of exhibits, and should encourage all his clientele to attend the exhibit, and avail themselves of the valuable health lessons there taught.

Exhibits and educational propaganda have done an enormous amount of good toward lessening the ravages of tuberculosis. There is no reason why we should not expect similar returns from an educational campaign directed against cancer. It is a preventable, and a curable disease. Its prevention and cure are dependent upon two conditions: the early recognition of the danger signals of the disease by the afflicted individual, and the early radical removal of the source of these danger signals by the physician. We as physicians then must be prepared to do our part, and to teach our patients to do theirs, if we are to hope to attain results similar to those attained by the educational campaign against tuberculosis. There will be installed in our health train a section devoted to a cancer exhibit, containing statistical charts, photographs, and pamphlets for distribution. These charts are founded upon authentic information, gathered by The American Society for the Control of Cancer, and contain the essential things which are definitely known about the disease. They will undoubtedly be the cause of many people consulting their family physicians about suspicious growths or symptoms from which they are suffering. When we are consulted, the first of the two requisites for the control of cancer has been fulfilled. It is then our duty to fulfill the second: to be well informed concerning the early signs of the disease ourselves; to make a careful and painstaking examination; and to have the courage of our convictions in our insistence upon the removal of any suspicious lesion with the least possible amount of delay.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTION.

Announcement has been made of business and local committees of the forty-third National Conference of Charities and Correction which is to be held at Indianapolis, May 10-17, 1916. One of the most interesting committees is that on Change of Name, for it has been advocated by some members that a title be selected which more truly indicates the nature of the body which is the national union of social workers. In preparation for the reception of the Conference at Indianapolis committees have been organized throughout the state for the purpose of making a great exhibit of the progress of Indiana in matters of social welfare during the past one hundred years, as the centennial of her admission to the Union will be celebrated in 1916. Organized social work, both public and private, has been growing by leaps and bounds in this central region, and it has been thought that the record of attendance at the last National. Conference (2,600) may be more than equalled.

The president, Dr. Francis H. Gavisk of Indianapolis, has had more than thirty years' experience in social service in that city, and occupies a unique position in that he is the first Catholic clergyman ever to preside over this Conference. The last issue of the Bulletin of the Conference is devoted to a review of social legislation during the year 1915. Nearly 500 measures are described and classified, varying in character from the authorization of women police in New Jersey to the establishment of suspended sentences for wife deserters in Hawaii.

BACTERIAL VACCINES IN TYPHOID FEVER.

The Evans Memorial for Clinical Research is desirous of coming into communieation with as many physicians as possible who have used bacterial vaccines in the treatment of typhoid fever for the purpose of collecting statistics concerning the efficiency or non-efficiency of the method as a therapeutic measure. If any who have done this even with only one or a few cases will send their names and addresses, blank forms will be sent to them upon which uniform reports may be made. Due credit will be given to each in any reports that may be published. Kindly address all communications to Dr. W. H. Watters, 80 East Concord Street, Boston, Mass.

Reviews from Current Literature

RADIO-THERAPY IN MALIGNANT TUMORS

Levin, Isaac: The Efficiency of the Coolidge X-ray Tube and the Rationale of Radiotherapy in the Treatment of Malignant Tumors. Surg., Gyn. and Obs., Vol. XXI, 1915, p. 374.

To those interested in the treatment of deep-seated malignant tumors, Levin's paper offers much material for careful thought and study. He shows effects of different rays on both normal and pathologic tissue in an interesting series of photo-micrographs, and draws from his experiments and studies some sane and reasonable conclusions.

In reporting the results of his treatment of 41 cases of hopeless, deep-seated cancer, he states: "Of these cases, 13 died, 11 discontinued treatment, 14 remained unimproved, and 3 seem to be at present clinically cured. At first glance these results do not seem to be gratifying, the more so that even the clinically cured cases, which represent 1.5 per cent of all cases treated, have not been observed long enough to give any certainty as to the permanency of the results. On the other hand, considering the hopelessness of the class of cases that came under treatment, the results are by far superior to anything which was attempted with this class of cases previously."

One of his cases, a carcinoma of the sigmoid with general metastasis, was treated for several months with the rays, after a preliminary exploration and colostomy. A careful autopsy was done, and microscopic sections of heart, liver, intestine, kidney, spleen, skin, muscle, lymph glands and peritoneal nodules were made. His findings are instructive in that they indicate the limitations as well as the value of radio-therapy in malignant tumors.

He believes that the "selective active action of X-rays on a tumor is due to a greater absorption of the rays by tumor tissue than by normal tissue."

"Two conclusions of great practical importance may be drawn from the analysis of this case: First, it seems plausible to suppose that if at the first operation the primary tumor would have been removed and the radiation applied only to the peritoneal nodules a recurrence may have been delayed for a long time. This clearly indicates the importance of combined surgical treatment and radiotherapy of malignant tumors. The gross tumor should be removed surgically, even when a radical operation can not be performed, then the small islands of cancer-tissue may be destroyed by raying even at a distance; i. e., even a metastasis may be influenced by the rays at its incipiency. This leads again to the second important conclusion to be drawn from the analysis of this case; namely, the importance of prophylactic treatment. Prophylactic post-operative radiotherapy has not been employed long enough and on a sufficient number of cases for a correct statistical estimation of its value. But this case indicates that minute nodules may be influenced by the rays at a great distance from the skin. Consequently a systematic prophylactic radiation must destroy all the minute groups of tumor-cells transported immediately before and during the operation. It will fail in those cases in which there existed already at the time of the operation large secondary metastatic tumors.

"The future success of the whole field of treatment of malignant tumors depends upon a very close co-operation between the radiotherapeutist, surgeon and pathologist."

R. C. T.

BLOOD TRANSFUSION

Percy, Nelson M.: A Simplified Method of Blood Transfusion With Report of Six Cases of Pernicious Anemia Treated by Massive Blood Transfusion and Splenectomy, Surg., Gyn., and Obs., Vol. XXI, 1915, p. 360.

The writer describes a method of indirect blood transfusion with a modification of the Kimpton tube. The Kimpton method is simple, easily and quickly done, and has the advantage of permitting the transfusion of a measured amount of blood. Percy has done 54 transfusions by his modified Kimpton method, with satisfaction in every case. He reports in full one case of pernicious anemia, apparently cured after splenectomy and massive multiple blood transfusions. patient received a total of 3,850 c.cm. of blood during one year, seven transfusions were done, giving each time from 500 to 600 c.cm. Recovery, however, was not rapid until after the spleen was removed.

Immediately before the first transfusion the patient weighed 105 pounds, hemoglobin 25 per cent, red cells 868,000, white cells 3,200. A year later she weighed 186 pounds with hemoglobin 90 per cent, red cells 5,200,000, white cells 8,800.

He states that the other five cases have done equally as well.

R. C. T.

OSTEOMYELITIS OF THE LOWER JAW

Dunning, H. S., McWilliams, C. A., and Mitchell, V. E.: Osteomyelitis of the Lower Jaw, Showing the Necessity of Associating the Dental Surgeon with the General Surgeon. Surg., Gyn., and Obst., Vol. XXI, 1915, p. 306.

In an excellent and well illustrated article the writers point out that the usual unsatisfactory results in jaw necrosis are due in part to a lack of co-operation between dentists and surgeons in the treatment of such cases, in part to faulty treatment in the early acute stages of the disease, and in part to the virulence of the infection.

They state that osteomyelitis of the lower jaw is frequent, and usually follows an abscessed tooth. Very few people have teeth that are not, or have not been infected, and devitalized infected teeth may lie dormant for many years without local inconvenience, necrosis being only discovered through radiographic examination. Necrosis of the lower jaw is particularly severe in young children, often as much as three-quarters of the bone being destroyed. This extensive necrosis is due to infection traveling downward into the inferior dental canal, and blocking the inferior dental artery, by actual destruction of the artery, or by thrombus, with a resultant rapidly spreading infection and destruction of the devitalized region.

They state that the dentist is often responsible for necrosis of the maxilla through his "passion for saving teeth," and by his refusal to pull badly broken down and abscessed teeth. "Drainage should be established before the pus is really under tension."

"If the infection has had time to invade the bone the abscess will not be aborted by the extraction of the tooth. In these advanced cases one can not always make the abscesses drain up hill through the tooth aveolus into the mouth, but a good free incision should be made along the aveolar process directly over the apex of the infected tooth. If free drainage is not obtained then an incision should be made under the inferior maxilla at the point of fluctuation, parallel with the inferior border of the maxilla. Poultices, salves, and other hot applications that are so often applied are the causes of scars upon the face that might have been avoided. Early extraction and free incision inside the mouth generally control the acute condition."

In commenting on the defective jaws resulting from improper treatment, they state that "No surgical lesion is so badly treated generally as infection and osteomyelitis of the inferior maxilla." Large defects, improper alignment of teeth, often so bad that chewing is impossible, non-union, continued pus discharge, sinuses, are all end results.

They advocate a not too vigorous surgical treatment; to restrict the damage to periosteum to a minimum; the wiring together of the upper and lower jaws with the remaining teeth in perfect apposition, since even fairly large defects will fill in, if not too much periosteum is destroyed, and that suitable prosthetic apparatus be provided to guard against fracture of the partly healed or weakened bone.

The most important point brought out in this excellent paper is that after the necrotic bone has been cleared away, and while healing is in progress, the jaws should be wired together or provided with an efficient prosthetic appliance to prevent the usual distressing malapposition of the teeth. Defects which are too large to fill in naturally may be corrected by bone grafting from the outside, after infection has disappeared and all wounds and sinuses have healed. The great difficulty with bone grafting work upon old healed cases of osteomyelitic deformity of the inferior maxilla, is that in order to provide for proper occlusion of the jaws, the mouth mucosa must be incised, and this always imperils the safety of a graft, since infection is almost certain to occur. R. C. T.

ARTIFICIAL PNEUMOTHORAX

Sacks, Theodore B.: Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis. Journal A. M. A., Vol. LXV, 1915, p. 1861.

American experience with the artificial pneumothorax treatment of pulmonary tuberculosis dates from 1898, when Dr. John B. Murphy, of Chicago, described the new method and described five cases in his oration on "Surgery of the Lung" before the forty-ninth annual session of the American Medical Association in Denver.

Previous to that, in 1882, unknown to Dr. Murphy, Dr. Carlo Forlanini of Pavia, Italy, suggested the method, following this by years of experimental work, and reported his first case of cure of an advanced unilateral case in 1895.

Following the introduction of the method by Dr. Murphy and his associate, the use of nitrogen gas compression was tried by several men in this country, notably at the Loomis Sanatorium, Liberty, N. Y., and other places. Various considerations, particularly the complications occurring in the course of treatment, led soon to the discontinuance of the work for a number of years.

Since the publication of the report of Dr. Brauer's, of Marburg, the method was reintroduced in this country in 1910. The method has grown in favor, particularly in the last three years, and the author's paper presents an analysis of the results of work in this period of time by twenty-four American observers.

The number of cases analyzed is 1,145, and it is evident from the large proportion of far-advanced cases, 88.7 per cent (with bilateral involvement present in 77 per cent, cavities in 62 per cent, and serious tuberculosis complications in 23 per cent), that artificial pneumothorax is being tried at present in this country chiefly in very advanced cases unimprovable under ordinary sanatorium regimen.

The total percentage of failures, unimprovements and deaths in the American

cases was 49.1, as compared with 42.9 in the cases reported by Brauer, Spengler and Zint. It is apparent that with the class of cases selected at present for artificial pneumothorax, the method is either inapplicable or is unproductive of any beneficial effect in almost half of the cases.

It may be a conservative estimate to say that, with the present technic and the class of cases treated, the percentage of durable results ("arrests or cures") is about 12 per cent.

T. T.

RADIUM IN PELVIC CANCER

Schmitz, Henry: The Action of Radium on Cancers of the Pelvic Organs, Journal A. M. A., Vol. LXV, 1915, p. 1879.

The author gives the results and draws his conclusions from a series of forty-one cases of cancer of the pelvic organs treated by radium.

While in none of the cases had sufficient time elapsed between the treatment and the final observation to allow any conclusions as to the ultimate curative value of the treatment, at the same time interesting observations as to the immediate effect and the methods appropriate are drawn.

The technique of applying the radium varied as to the time of application and the kind of metal filters used, not in the amount of milligrams of radium element used.

After trying various methods of application of the radium Schmitz finally adopted the following as the best. A course of treatment consists of six to eight treatments of from ten to twelve hours each with intervals of from thirty-six to sixty hours in between each treatment. This course is followed by an intermission of three weeks. An examination is then made. If nothing abnormal is found three applications of radium are given, one every other day and no further treatment unless indicated. If pathological conditions are found at examination a second prolonged course of from 3,000 to 4,000 milligram hours is given.

Brass filters, from 1 to 1.5 mm. thick are used in preference to lead filters. The

secondary rays produced in the metal fibers are arrested by a cot of pure Para rubber surrounding the filter. The healthy vaginal mucosa is protected by packing with gauze and rubber. The amount of radium used is uniformly 50 mg.

The immediate results of this treatment, both from the clinical and histological standpoint, shows that the radium rays are a valuable addition to the therapy of surgery, according to the author.

He divides the cancers into three classes: First, inoperable growths which are so far advanced that cauterization can not be used as a preliminary to radium treatment; second, inoperable growths in which cauterization can be used; and, third, operable cases.

The cases of the first class, as well as recurrent cancer, are as a rule refractory toward the radium rays. If improvement occurs it is temporary.

Good results are obtained in cases of the second class, in which cauterization preceded. In some instances the growth was so reduced that inoperable cases became operable. The initial results in all these cases were good, although in some the improvement was but temporary.

In class three, operable cases, Schmitz advises an extensive cauterization as preliminary to operation. After extensive abdominal panhysterectomy, as soon as the patient recovered from operation, radium treatment was given as a prophylactic to recurrence.

The action of the gamma rays on carcinoma tissue has been studied histologically in a number of sections. Schmitz finds that at first there is, about 10 days after the first application of radium, an enlargement of the carcinoma cells, together with a hyperchromatosis and a pyknosis of the nuclei.

This is succeeded by a stage of cell disintegration. The cell detritus is absorbed by phagocytes; macrophages and microphages being highly active in this process. Finally young fibroblasts fill the space of the destroyed carcinoma cells and the carcinomatous area is replaced by connective tissue. This last stage usually appears after from one to three months of treatment though it sometimes comes earlier.

G. R. H.

EXUDATIVE DIATHESIS

Leopold, Jerome S.: The Atropin Treatment for the Exudative Diathesis in Infancy. Am. Journal Diseases of Children, Vol. X, 1915, p. 288.

For several years a group of symptoms characterized by an exudation into the skin and mucous membranes of infants has been spoken of as "The Exudative Diathesis" of Czerny. The skin of such infants shows some form of eczema varying in grade from a mild form of seborrhoea to extensive infiltration and excoriation. Catarrh of the gastro-intestinal tract and catarrhal affections of the respiratory tract, evidenced by corvza, pharvngitis, recurrent bronchitis and ashthma are often present. The treatment of this condition has been largely dietetic with the external application of ointments. In spite of the best therapy many of these cases fail to improve.

Based on the assumption that the exudative diathesis is due to increased tone of the vagus system and on the known fact that atropin causes a decrease of vagus irritability, the author has in a number of instances employed atropin as a curative measure for this condition. He reports ten severe cases of exudative diathesis successfully treated by the internal administration of atropin. No changes in diet were made and no other drugs employed. Children with this condition tolerate atropin well and large doses are necessary for a successful outcome. Atropin was used in a solution of one grain of atropin sulphate to an ounce of water.

On the first day of treatment three drops of this solution were given, and if no untoward effect was produced, the dose was increased one drop daily till the patient received about thirty drops. The maximum dose was given daily till all signs of the disorder had disappeared.

J. D. L.

INTESTINAL PARASITES

Greil, Gaston J.: Intestinal Parasites in Children. Am. Journal Diseases of Children, Vol. X, 1915, p. 363.

By a systematic examination of a large number of children, most of whom manifested no symptom of intestinal disorder, the author concludes that intestinal parasites are of much more frequent occurrence than is usually admitted. A routine examination of 665 children under 12 years of age revealed 240 infected individuals. Symptoms are unreliable and examination of feces will often show the presence of parasites in children in whom they are unsuspected. The author believes that intestinal parasites are of much importance as respects the health of the child.

Less than 10 per cent of cases infected complain of symptoms referable to the infection.

Every county and municipality should appoint a physician for special work along this line and no child should be permitted to attend school till examined for parasites and the results proven to be negative.

T. D. L.

EXAMINATION OF SCHOOL CHILDREN'S EYES, EARS, NOSES AND THROATS

Allport, Frank: State Legislation Concerning the Examination of School Children's Eyes, Ears, Noses and Throats. Ophthalmology, Vol. XI, 1915, p. 118.

"Seventeen states have laws on this subject. The first law enacted on this subject was passed by the state of Connecticut in 1899. It referred merely to the examination of school children's eyes, and said nothing about ears, noses or throats. It was the entering wedge of legislation requiring physical examinations of any kind for school children, and was therefore the beginning of required physical tests in this country. I mention this because the eve surgeons of the United States should be given full credit for inaugurating this much needed reform. The next state to pass a similar, but broader, law was Massachusetts in 1906, and this law took into consideration not only sight, but hearing as well, and when Colorado in 1909

passed a law it included broadly eyes, ears, noses and throats, and most subsequent laws have since followed the example of Colorado in this respect."

The author then gives copies of the various laws in seventeen states, all of which follow the same lines as laid out above with minor variations. The state law of Indiana gives explicit directions for the examination of sight and hearing by teachers. As this is of general interest it will be quoted verbatim as follows:

"The teachers in all the public and parochial schools of the state of Indiana shall test the sight and hearing of all school children under their charge, once in each school year, and at such other times as may be necessary. The sight test shall be made by the use of Snellen's Test Type Chart and the hearing test shall be by the watch test or the whisper test, preferably the whisper test. An individual record shall be kept of said test and whenever a defect of vision or hearing is noted the case shall be referred to the school physician. Teachers and school officials shall rigorously exclude from school all children specified in any notice of exclusion issued either by the school physician or by the local health officer until such children shall present a certificate of admission from the school physician or by the health officer.

Rules for Testing Eyesight.

Rule 1. The annual test for eyesight and hearing shall be made as early in the school year as possible, preferably in September. Individual pupils may be tested at any time that a test is considered necessary.

Rule 2. All tests shall be made as nearly as possible under the same conditions and shall be supervised by the principal or superintendent, in order to see that the conditions of the test are uniform as far as possible for the different classes.

Rule 3. Do not expose the test type chart except when in use, as familiarity with the chart leads children to learn the letters 'by heart.' Children should be examined singly.

Rule 4. Test each eye separately. Have

the pupil begin at the top of the test card and read down as far as he can, first with one eye and then with the other. Hold a card over one eye while the other is being examined, but do not press on the covered eye, as pressure may produce an incorrect examination.

Rule 5. Place the test chart on the wall in a good light at about the level of the pupil's head and at a measured distance of 20 feet from the pupil. The chart should have a good side illumination and not hang in range of a window, which will dazzle the eyes.

Rule 6. Children wearing glasses shall be tested with the glasses properly adjusted, and if sight is found normal with the glasses it shall be recorded as normal.

Rule 7. Record as defective only those whose vision is 10-20 or less in either eye.

Rule 8. Where the child can not name the individual letters, although able to read, the chart figures may be used. If the child does not know figures or letters, use the chart of inverted E's, asking the child to tell by the movement of the hand the side on which there is an opening on the E's; *i. e.*, up, down, right or left.

Rule 9. The lines on the chart are numbered to indicate the distance the respective letters should be read by the normal eye. The record is made by a fraction, of which the numerator represents the distance of the chart from the child and the denominator the lowest line he can correctly read. Thus, if at 20 feet the pupil reads the line marked 20 feet, the vision is 20-20 or normal. If he only reads correctly the line above marked 30 feet, his vision is 20-30, or two-thirds normal. If at a distance of 20 feet the pupil can only read correctly the line marked 40 feet, the vision is 20-40 or 10-20, which must be recorded as defective.

If a pupil can not read the largest letters he must go slowly toward the chart until he can. The distance he is from the chart when he can read the largest letters will be the numerator and 200 the denominator.

Rule 10. Report to the State Board of

Health the total number of children examined and the number found defective in eyesight and hearing by test.

Method of Testing Hearing.

The person conducting the test should be possessed of normal hearing. The examination should be conducted in a room not less than 25 feet long and situated in as quiet a place as possible. The floor should be marked with parallel lines, one foot apart and numbered. The child should sit in a revolving chair in the first space. Examination should be made with the whisper or spoken voice. The child should repeat what he hears and the distance at which words can be heard distinctly should be noted. The two ears should be tested separately. The test words may consist of numbers from one to one hundred and short sentences. It is best that but one pupil at a time be allowed in the room, to avoid imitation. The standard to be adopted is as follows: In a still room the standard whisper can be heard easily at 25 feet. The whisper of a low voice can be heard from 35 to 45 feet and of a loud voice 50 to 60 feet.

In the watch test the ticking of a watch is used instead of the voice. The watch test, however, can not be depended upon, for the reason that children when asked if they hear the ticking of a watch will answer "Yes," when in fact they do not hear the watch. For this reason the whisper test should be used."

A set of non-medical questions has been devised by the author to be used by teachers. For instance: "Does the pupil habitually suffer from inflamed lids or eyes?" "Does matter or a foul odor proceed from either ear?" "Is the pupil an habitual 'mouth breather?" etc. It will be seen that these are all non-medical questions, and the others are the same. No medical knowledge whatever is necessary. The teacher is not expected to express any opinion as to a child's disease; she probably will not have any—she

will merely know that the child has red eyes, or that the ears discharge and smell, or that the child is a "mouth breather," etc., etc. She simply finds out that *something* is the matter, the doctor consulted will do the rest. These questions are so simple that a superficial reader might deem them inadequate, and yet, if they are correctly answered, they will disclose the existence of—let us say—90 per cent of serious eye, ear, nose and throat diseases.

The author concludes:

"In the light of my own observation and experience for the last twenty years, and from much information gathered during the past two years, during which time I have been chairman of the Conservation of Vision Committee of the American Medical Association, I have endeavored to gather together what is being done along these lines in this country, and to draw deductions therefrom. I have no hesitation in saving that I believe the best method of dealing with the subject, to pass laws in each state, requiring the annual and systematic examination of school children's eves, ears, noses and throats, according to the method I have frequently described, and which is now so generally used." W. S. M.

Action for Civil Malpractice.—It is perhaps not sufficiently realized by the profession how much stress is laid by patients upon cosmetic results. If there is a likelihood of deforming scars or bad results cosmetically, it is well to anticipate this by informing the patient, so that the disappointment may not be too keen and that the patient may by anticipation not receive it as a shock. Even greater care should be taken where the purpose of the operation is for cosmetic purposes. Not only the ordinary result of the operation is to be anticipated, but also the misconduct of the patient, which may render the bad result.—Robert J. Folonie, I.L. B., in Illinois Medical Journal,

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

BISMUTH TRIBROMPHENATE.—Basic bismuth tribromphenate. It is claimed to be a non-irritant and non-toxic antiseptic and an odorless and efficient substitute for iodoform. It is said to be of value in gastrointestinal catarrh, proctitis, dysentery, diarrheas, etc. Merck and Co., New York. (Jour. A. M. A., Nov. 13, 1915, p. 1731.)

BUTYL-CHLORAL HYDRATE, MERCK.—A non-proprietary brand of butylchloral hydrate admitted to New and Nonofficial Remedies. Merck and Co., New York. (Jour. A. M. A., Nov. 13, 1915, p. 1731.)

ETHYL BROMIDE, MERCK.— A non-proprietary brand of ethyl bromide admitted to New and Nonofficial Remedies. Merck and Co., New York.

Homatropine Hydrochloride, Merck.—A non-proprietary brand of homatropine hydrochloride admitted to New and Non-official Remedies. Merck and Co., New York.

Sodium Cacodylate, Merck.—A non-proprietary brand of sodium cacodylate admitted to New and Nonofficial Remedies. Merck and Co., New York.

IODOTYRINE TABLETS, 3 GRAINS.—Each tablet contains iodothyrine 3 grains. The Bayer Company, Inc., New York.

THYRESOL PEARLS, 5 GRAINS. — Each pearl contains thyresol 5 grains. The Bayer Company, Inc., New York.

THEOCIN-SODIUM ACETATE TABLETS, 1½ grains.—Each tablet contains theocin-sodium acetate 0.1 gm. The Bayer Company, Inc., New York.

Ampuls Emetine Hydrochlorice, Mulford, 1-12 Grains.—Each ampule contains emetine hydrochloride 0.005 gm. H. K. Mulford Co., Philadelphia.

AMPULS EMETINE HYDROCHLORIDE, MUL-FORD, 1-3 GRAIN. — Each ampule contains emetine hydrochloride 0.02 gm. H. K. Mulford Co., Philadelphia.

AMPULS EMETINE HYDROCHLORIDE, MUL-FORD, 2-3 GRAIN.—Each ampule contains emetine hydrochloride 0.04 gm. H. K. Mulford Co., Philadelphia.

Ampuls Sodium Cacodylate, Mulford, 1½ Grains.—Each ampule contains sodium cacodylate 0.1 gm. H. K. Mulford Co., Philadelphia.

AMPULS SODIUM CACODYLATE, MULFORD, 3 GRAINS.—Each ampule contains sodium cacodylate 0.2 gm. H. K. Mulford Co., Philadelphia.

AMPULS QUININE AND UREA HYDRO-CHLORIDE, 1 PER CENT, MULFORD.—Each ampule contains 5 c.c. of a sterile 1 per cent solution of quinine and urea hydrochloride. H. K. Mulford Co., Philadelphia;

AMPULS MERCURY SUCCINIMIDE, MUL-FORD, 1-6 GRAIN.—Each ampule contains mercury sucinnimide 0.01 gm. H. K. Mulford Co., Philadelphia.

CALCIUM PEROXIDE, P. W. R.—A non-proprietary preparation of calcium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Magnesium Peroxide, P. W. R.—A non-proprietary preparation of magnesium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Sodium Peroxide, P. W. R.—A non-proprietary preparation of sodium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

STRONTIUM PERONIDE, P. W. R.—A non-proprietary preparation of strontium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Publisher's Notes

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

It is a generally recognized fact that antidiphtheric serum has, in large measure, robbed diphtheria of the dread with which it was formerly regarded. In the twenty years since its introduction into therapeutics it has saved countless lives and given to the medical profession control over a disease in the presence of which the physician had previously been all but helpless. The value of diphtheria antitoxin, both remedial and prophylactic, rests upon so sure a basis that it requires no word of commendation. In the language of an eminent American pediatrist "no table of figures is so convincing to an individual as personal experience, and by this argument one by one the opponents of antitoxin have been converted."

What make of diphtheria antitoxin to employ is a question which, sooner or later, confronts every physician. It is a question that should not be answered "off-hand." On the contrary, it merits the most thoughtful consideration. Obviously, all antidiphtheric sera are not of equal merit. The antitoxin selected should be a product of established purity and potency—a product, moreover,

that is backed by experience, scientific knowledge and adequate manufacturing equipment. Perhaps the name which comes most promptly to mind in this connection is that of Parke, Davis & Co., among the earliest and now the largest producers of diphtheria antitoxin. That this concern regards the business of serum production as one not only worthy of the highest skill and endeavor, but actually demanding it, is evident from this excerpt from a current announcement:

"When (in 1894) we undertook the manufacture of diphtheria antitoxin, we had one dominant ambition: to produce an antitoxin that should leave nothing to be desired—an antitoxin that the physician might administer at a critical moment with assurance that it would not fail him. In all the years that have since elapsed we have never once lost sight of that ideal. Diphtheria antitoxin that is carefully, scientifically, conscientiously made demands a large expenditure of time and money. The cost is amply justified. The value of a human life cannot be measured in dollars and cents. We produce the best possible antitoxin, and we spare no expense in doing it."

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ORIGINAL ARTICLES

PYELITIS, ITS SYMPTOMATOLOGY, DIAGNOSIS AND TREATMENT.*

HARRY A. PEYTON, M. D., Jacksonville, Fla.

Pyelitis, as a pathological entity, if it exists at all, must certainly be considered rare. Clinically, no one will doubt its existence. As a matter of fact the picture usually presented under this term is an inflammation of both the renal pelvis and parenchyma, the latter to a varying degree. It is to the mild variety of parenchymal involvement, or as custom has it, pyelitis, and more particularly to the chronic type, that the following remarks are directed.

With the advent of the more precise methods of genito-urinary diagnosis, viz., cystoscopy, ureteral catheterization, renal functional tests, X-ray and radiography of the renal pelvis and ureter after having been filled with an opaque substance pyelo-ureterography), (pyelography or many disease conditions that were formerly erroneously diagnosed as pyelitis, have fallen by the wayside and the true diagnosis established on perfectly definite findings and the treatment put on a rational basis. Personally, I never accept a diagnosis of chronic pyelitis until all the facts have been assembled and the various possibilities ruled out.

As an example of the importance of exhausting all the means at our disposal, the following data on a patient who was referred to me with a diagnosis of pyelitis may be of interest.

The patient, a woman, age 36, gives a history of recurring attacks of tonsillitis

for several years. She has had two children, the first of which was delivered instrumentally. For ten days following the birth of this child she was catheterized and states that the bladder function has never been entirely normal since.

The patient has been conscious of pain just anterior to the left anterior spine of the ilium for the past year. This pain at times would become acute, when general abdominal discomfort and pain in front of the right hip would be felt. Two years ago patient had an attack of frequent and urgent urination which lasted for a short time. She voids at normal intervals except during premenstrual period when there is frequency. Urination has never been painful, she has never had hematuria or passed stone. It will be noted that patient has never had pain in either kidney region nor has the pain been referred.

Examination shows an exopthalmic goiter, and lacerated perineum with second degree prolapsus uteri. Neither kidney is palpable or tender on bimanual palpation or fist percussion. The physical examination is otherwise negative.

Catheterized specimen of urine shows the following: Cloudy, albumin, low sp. gr., negative for sugar, microscopically, many pus cells and bacilli. No casts or red cells.

Cystoscopic examination: Bladder capacity normal. Bladder wall and trigone normal. Both ureteral orifices are patulous and functionate sluggishly. Cloudy urine is seen issuing from each side. Both ureters were next catheterized, the catheters apparently reaching the pelvis. Specimens

^{*}Read before the Duval County Medical Society, September, 1915.

of urine were collected from each kidney and with the catheters in situ six milligrams of phenolsulphonepthalein were injected intravenously and the time of appearance in the urine noted, the urine collected for one half hour from this time and the quantity of pthalein determined. The results tabulated are as follows:

Left Kidney. Cloudy
Acid
55 c.c.
8 minutes
3.6%
Same
Same

Leakage of pthalein around catheters into bladder amounted to 8%, most of which in all probability came from the left side.

X-ray shows a large shadow in right kidney and three smaller ones in the left. Ureters normal. A 10% solution of collargol was run into the right ureter and X-ray made. While the picture was not perfect it was sufficiently distinct to demonstrate the calculus lying in the pelvis of the kidney.

Remembering that the total amount of pthalein secreted in one-half hour after intravenous administration is 30% from each kidney, it is readily seen that the function of each kidney is markedly impaired, and from the above examination that there is bilateral infection with stone. The diagnosis with this evidence at hand becomes very simple indeed, the condition being a double pyelonephritis with bilateral nephrolithiasis.

The symptoms of pyelitis naturally vary with the acuteness or chronicity of the disease, the extent of involvement, the nature of the contributory causes, among which may be mentioned renal and ureteral stones, kinks and strictures of the ureter, etc. The symptoms may be classified as general and localized to the kidney or bladder. The general symptoms are due to

toxemia, the absorption and failure to eliminate waste products. Uremic symptoms are not infrequent when the disease is bilateral and in prostatics. In pyelitis of acute onset, fever is constantly found and does not conform to any particular type; chills and sweats are a frequent accompaniment. The severity of the systemic disturbance is nicely illustrated in those seemingly obscure fevers of infants and young children. Pain or soreness in the kidney region is of fairly constant occurrence in the acute cases but may be overshadowed by the vesical symptoms. The latter is not often due to an actual co-existing cystitis but to vesical irritability and in the chronic cases to a polyuria which is almost invariably present.

Pain referable to the kidney is rarely found in the chronic types of this disease unless some complication is present. There may, however, be dragging pain which is occasionally so severe as to simulate renal colic. Patients may go for years with a a chronic pyelitis and remain perfectly comfortable, the condition being ultimately suspected when a routine trinalysis is done.

The diagnosis rests on a careful examination of the urine when pus, red blood cells and bacteria are found and subsequently on a complete examination of the entire urinary tract. After excluding pus and bacteria of urethral origin, cystoscopy should be performed when the degree and extent of the cystitis, if present, can be ascertained and the ureteral orifices studied. The latter may be surrounded by an inflammatory areola on the infected side and if pus be present in sufficient amount cloudy urine can be seen issuing from it. Again in the chronic cases the orifice may vary from the normal to the slightly patulous and in the long standing cases to the retracted, typical golf-hole type. Both ureters should next be catheterized and the separate urines examined chemically, microscopically and culturally. With the catheters in place the phenolsulphonepthalein test is done, the time of appearance on each side noted and the total excretion for a period of one-half hour estimated. In a certain percentage of cases it is necessary to have a pyelogram when very definite information may be obtained which is of utmost value both from a diagnostic and prognostic point of view.

It is hardly necessary to mention that a complete physical examination should always be made as pyelitis is quite frequently secondary to other foci of infection, the eradication of which will hasten the cure of the pyelitis.

The treatment of the acute cases is so well standardized that it is hardly necessary to more than mention that rest in bed, correction of dietetic errors, especially in children, forced water, adequate doses of hexamethyleneamin or in certain cases potassium citrate, is usually all that is required. Aynesworth (1) reports several cases of acute pyelitis treated by pelvic lavage with argyrol, and in one case by simple catheterization of the ureter, with excellent results. He is of the opinion that the mere passage of the catheter resulting in better drainage is as much responsible for his good results as is the lavage.

In chronic pyelitis the prognosis for complete cure depends largely on whether or not there is inflammatory dilatation of the pelvis with deep infection of its walls as shown by the pyelogram. Those chronic cases that show an abundance of pus and bacteria, with very little or no change in the pelvic outline and with normal function, as shown by the pthalein test, offer the best chances for cure and by cure I mean bacteriologically sterile urine.

The keynote to the successful treatment of these chronic cases is lavage of the renal pelvis. In the last mentioned group of cases, *i. c.*, those with normal function and absence of pelvic dilatation with retention of urine in the pelvis, a cure is uniformly possible with this method of treatment. In

those cases with dilatation, etc., while a complete cure is rarely possible the condition can be greatly ameliorated, which, in itself, is a distinct improvement over the older methods of treatment which accomplished very little indeed.

The technic of lavage is rather simple and consists in the catherization of the ureter on the infected side and the instillation of the drug by means of a special svringe or by gravity into the renal pelvis. It is advisable to introduce the catheter about half way to the kidney so that the solution will flow over the upper portion of the ureter, for, as pointed out by Geraghty (2) there is nearly always a coexisting ureteritis. The quantity of solution used in the lavage is always less than the capacity of the pelvis. As 7.5 c.c. is the average capacity of the normal pelvis, not more than 5 c.c. should be used unless the pelvic capacity has been previously determined. The catheter is then left in place until all the solution has drained away.

A large number of drugs have been used for purposes of lavage, but the ones that have found most favor are argyrol, protargol, formaldehyde, aluminum acetate and silver nitrate. The last mentioned is by far the most useful and can be used in much greater strengths than usually advocated. It is advisable to begin with weaker solutions and gradually increase the strength until the patient shows a wellmarked reaction. I have used silver in this way until strengths as great as 4% were reached without causing discomfort. In some cases a much weaker solution will cause a reaction that will give rise to severe pain requiring morphine for its relief. While reactions to this degree are to be avoided a moderate one seems really essential to the best results. These lavages can be done every five to seven days, depending on the reaction produced. In the class of cases with no decrease in function and with a normal pelvic outline the results of treatment in this way are, indeed, striking.

Surgical procedures become absolutely necessary to correct conditions rendering the kidney liable to infection, thus, stone either in the kidney or ureter should be removed, ureteral strictures dilated, kinks due to movable kidney corrected by suspension of the kidney, pressure from uterine fibroids corrected, etc.

In closing, a few remarks with reference to the use of vaccines in pyelitis seem indicated. On reviewing the literature on this subject one will find many advocates for and against this mode of treatment. The consensus of opinion of the most careful workers is that no case of chronic pyelitis is susceptible to cure by vaccines which has resisted other forms of treatment. While not attempting to go so far as to condemn the use of vaccines in this disease my personal experience and observation with both the stock and autogenous ones has been very disappointing.

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THE CO-OPERATION OF THE MED-ICAL PROFESSION AND THE PRESS.*

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I am pleased to appear before you and thank you for the privilege. My message is to endeavor to convey to the Press the viewpoints of the medical man. If I can accomplish, in a measure, this task I have set myself I will be grateful.

You probably notice this early that the personal, singular pronoun "I" is conspicuous. I would exceed my privilege, possibly, were I to use the editorial plural "We." This discussion is not an editorial, besides. I am a bachelor.

A congressman in discussing the Press on one occasion observed that he noticed that when a man in the newspaper business obtained a skillet full of ink and a shirt-tail full of type he praclaimed himself. "We, the people." I am not ready to endorse that —not just now. But it has been said that the Press is a "moulder of public opinion." I am ready to endorse that in a measure and do it now. In moulding public opinion, however, the Press assumes a great moral responsibility and the horizon of the Press cannot be too circumscribed.

Much might be said on the subject of the co-operation of the medical profession and the Press, but I shall attempt to confine my remarks to a function common to both-education-and endeavor to show the relations that ought to exist between the two in the effort to enlighten the public. The public are unable to judge the qualification of a physician and rely entirely on another's opinion which may be of little value; therefore the practice of medicine must of necessity be governed by laws and regulations as any other business. Medical laws are enacted and enforced for the benefit and protection of the public. The doctor wants this-nothing more-and the true, intelligent, honest physician knows the requirements necessary to bring to issue the measures conducive to eliminate the inefficient, the imposter, the quack, the charlatan. Education is what the public need; it tarries at the heels of time and until public opinion is aroused to the way in which people have been swindled and duped by medical and quasi-medical frauds present conditions will obtain. The Press can aid materially in this educational propaganda.

I cannot better illustrate this point than to recall the series of articles on "The Great American Fraud" that appeared in Collier's

^{*}Read by invitation before the Florida Press Association, at Jacksonville, October, 1915.

Weekly some years ago. How the author exposed one by one these imposters and proved his contentions with example after example. Many suits at law were threatened Collier's Weekly but none ever came before the courts and Collier's, as far as I know, never compromised one. To my mind these articles did more to enlighten the American public relative to the blood money they were being defrauded of than the efforts of the medical profession along similar lines for many years. It seems when medical men write and speak of the frauds, outside their own ranks, the public is incredulous and attribute the criticism to jealousy and insincerity. I am satisfied that these frauds contribute to the suffering and poverty of the public and lessen the income of the medical profession immaterially. It is the poor, illiterate and ignorant that enlarge the coffers of these frauds and this class of people are treated by physicians for nothing as one of their numerous contributions to charity.

A great many periodicals and newspapers throughout this country have accompanied and followed Collier's in publishing articles of an educational nature, relative to frauds, quacks and charlatans, and refuse their advertising columns to fradulent advertisers. For this evidence of good faith and co-operation the medical profession is truly grateful. Each week, for the past year, many papers of this state publish the press notices on public health questions sent out by the state health officer. A few years ago the press of the south, and especially Florida, published column after column of material, furnished by a committee of the Southern Medical Association, relative to the measures to be pursued in the eradication of malaria. I am pleased. in this connection, to quote an editorial from a popular Florida paper of August 6th, 1915:

"The Florida Chiropractors have formed an association for the advancement of science! Great heavings! What next? There are possibly a dozen of these fakirs, called chiropractors, doing business in Florida. And what is their business? Simply to relieve you of your money. These fakirs advertise to cure you of insanity, locomotor ataxia, cancer, jaundice, palsy, paralysis, piles, pips, etc., by removing the cause. Something is surely wrong with the laws of Florida when these fakirs are permitted to "advance" the science of swindling the poor and ignorant without molestation. One of these fakirs says that all sickness is caused by 'subluxations' in your spinal column; that you are not to get discouraged for he can remove the cause of all dis-

Some years ago a weekly paper of this city did valiant service in ridding the community of a number of so-called physicians who advertised under the name of the "German-American Doctors." Quack doctors and patent medicines are equally fraudulent and ought to be so considered by advertising mediums. These exhibitions of co-operation are encouraging and promising and when the press, as a whole, join the ranks the battle will be nearly won.

I was somewhat chagrined, however, to read an editorial in a state paper during May last, in which the editor was discussing a state board of health matter, then before the legislature, which had nothing whatever to do with medical legislation; yet he goes out of his way to take a fling at the efforts of medical men to secure needed—sorely needed—legislation for the protection of the public. This is what he writes:

"In this connection the people of Florida are growing decidedly weary of the biennial rows that are engaged in at Tallahassee between doctors of different types, whether they be allopaths, homeopaths, osteopaths, chiropractors or others. The constitution of the United States and the common law of liberty gives a man the privilege of calling for any treatment for disease that may

appeal to him, and those who try to foist their medical or other views upon others are doing no good to themselves or the public.

"'Mind your own business and see that the other fellow does likewise,' appeals to us to be a very good suggestion on this subject."

The first and last clause of this quoted editorial is with difficulty credited to the same mind.

"Mind your own business and see that the other fellow does likewise" is just what the medical profession is doing; it is the only business making an effort to put itself out of business.

The medical profession has been called a "Trust." By whom? By those who attempt to defraud the public. Every organization of medicine from the great national association down to each county society is concentrating its every effort to the task of educating the public and the perfecting of its own ranks.

The county medical society is the unit of medical organization from which its members derive knowledge and enjoy social intercourse, and it is from members who attend its meetings that the Press may secure any matter, relating to medicine, that it wishes to publish. I would invite you to meet and know these men and co-operate with them in their endeavor to make the community in which they live healthy and free from disease. I am satisfied the real physician will meet you more than halfway.

In the last legislature of Florida, 1915, a bill was introduced to regulate the practice of treating sick human beings which met the approval of the regular, homeopathic, eclectic and osteopathic practitioners of the state. Many concessions were made by the regular physicians in order that a composite examining board might be enacted. The bill provided for a board composed of one member each of the homeopathic, electic and osteopath schools,

and three or four members of the regular school. This seemed a reasonable representation; in fact, the regular school was not represented in proportion to membership as the others, but this was allowed by the committee in charge of the measure. There are in Florida twelve to fourteen hundred representatives of the regular school, less than one hundred homeopaths, possibly one hundred eclectics and not over two hundred and fifty osteopaths. This was the first attempt to form a composite board. Each of these four schools now operate under its own law. This bill met with a great deal of ridicule and levity from the state Press because of its legal technicalities, not medical technicalities, made necessary by combining the four schools. It met with failure—a majority of the bright and supposedly intelligent members of the lower house amended the bill to exclude the chiropractor (whatever that might be) from its provisions. Possibly if the socalled neuropath, poropath, naturopath and a few other pathies and cults had been at Tallahassee, these also would have been exempted.

The medical profession is one of the oldest in history and has lavished its achievements for the benefit of the human race free, unreserved and wholesome prodigality. Witness the science of medicine in the construction of the Panama canal, the subjugation of plague in San Francisco, New Orleans and elsewhere the eradication of vellow fever at a personal sacrifice, controlling the ravages of smallpox by vaccination, typhoid fever curtailed by inoculation, diphtheria mortality lessened 60 to 80 per cent by antitoxin, lockjaw, hydrophobia and meningitis prevented by the prophylactic use of serum. Malaria can be annihilated by quinine, screening and drainage, the silk industry of France was saved by discoveries of Dr. Pasteur. Enough—but not all.

The men who have been instrumental of

these achievements were not seeking their own aggrandisement, not quacks or charlatans, but earnest, thoughtful, scientific men endeavoring to curtail sickness, relieve the ill and make the entire earth a healthy habitation for man.

I hold that it is only fair to the public that anyone desiring to treat the sick for compensation should pass the same examination in the fundamentals of medicine. The methods of treatment employed can be eliminated.

Since the United States government has delegated each state as a guardian of its own health laws and medical licensure, the state must meet the responsibility. A candidate for licensure not qualified to pass an examination, such as is usually given by the various state boards of examiners, is certainly a dangerous person to impose upon the public. I would hold the state guilty of criminal negligence that did not protect its citizens from incompetent practitioners. How will the competent be found? The competent physician usually attends the meetings of his county, state, regional, American and foreign bodies, contributing to their programs, discussing scientific subjects presented and entering into their deliberations. A committee either elected by a state society or appointed by its president could and would select the best men in the state to serve on a board of examiners. A medical practice act properly constructed, enacted and enforced is nothing more or less than an institution for the public benefit and protection.

Some maintain it would exceed legal rights to confer on a board of medical men judiciary powers. If a state can create an executive body of medical men, with restrictions and punishments for dereliction, it certainly can confer on such a body powers of jurisdiction. Unfortunately, in the past, doctors had thrust upon them the reputa-

tion of being poor business men, for the simple reason that they were poor collectors and did not send bills promptly or did not seek legal collection. I have seen very few physicians in my experience of seventeen years who I could admit thought more of the commercial side of medical practice than the professional.

You ask as the editor did in the quotation above—why graduates of the different schools of medicine and the so-called drugless therapeutists cannot unite and form one body of people engaged in the healing art. Two illustrations will possibly furnish an answer:

An osteopathic practitioner's little child becomes sick with throat trouble. He treated it by his usual methods; four or five days elapsed and no improvement; a physician was finally called to see the little patient and found a case of diphtheria, advised the use of antitoxine, but offered little hope of good results as the disease had progressed too far. The child died in a few hours. No spinal adjustment or manipulation has, per se, ever cured a case of diphtheria or any other infectious or contagious disease.

A woman with a lump in her neck consulted an osteopath and after submitting to his treatment for some weeks without benefit put herself under the care of a "doctor of chiropractic." After a series of treatments from this latter, she was advised by friends to see a physician. The physician after careful examination diagnosed the condition as cancer. The manipulation and rubbing had undoubtedly liberated cancer cells from a small tumor into the adjacent and surrounding tissues of the body; she was dead of general cancer in two months from the time the physician was first con-Manipulating and rubbing malignant growth is an excellent method of disseminating a neoplasm into other parts of the body.

THE RELATION OF THE PHYSICIAN TO THE PHARMACIST FROM THE STANDPOINT OF THE PHYSICIAN.*

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The gradual but definite development of pharmacy has nobly kept pace in recent years with the advancement in medicine. During the past two decades both professions have been practically revolutionized. Not only have each made marvelous strides in scientific research and discovery beyond what was thought possible twenty years ago, but from the ethical and moral standpoint both have gone rapidly forward and established system from the chaos that existed even only a few years ago. Being closely allied as they are it has taken the best thought of the leaders in both lines of activitiy to prevent a conflict of interests. Conscienceless men in both of the professions have at times been guilty of acts that caused suspicion of the intentions of the other which was not justified; but to the everlasting credit of both physicians and pharmacists the better elements have prevailed and have frowned down and refused to endorse the questionable methods indulged in by their less thoughtful confreres. It is only by the thoughtful application of the Golden Rule that the two sciences can fulfill their joint but separate mission mutually and helpfully, thus realizing the highest aims of both.

With the evolution of pharmacy has come the drug store carrying not only the pharmaceutical preparations necessary to their business but a vast number of what might be termed accessories. The drug store has finally segregated from other lines of business those articles belonging to its special sphere of trade and has become an indispensable institution. Through the ef-

forts of high-class pharmacists the public is receiving a measure of protection from exploiters and charlatans that could have come in no other way. We of the medical profession have long realized that without the pharmacist-druggist we would be so handicapped as to seriously minimize our efficiency.

As pharmacy and its necessary adjunct, the drug store, advances in efficiency in like proportion does the dispensing doctor disappear. And gladly does the physician give up dispensing. He has discovered by long and costly experience that he cannot be doctor and druggist both and reach his highest point of proficiency.

A casual look at the history of medical and pharmaceutical legislation gives a sure index of the gradual separation and defining of the two vocations. The laws of our state have held and vet hold that on account of the dispensing physician being in a measure a pharmacist, he was entitled to the same privileges as the pharmacist in the way of licensure regardless of whether he had had special training in the business of filling prescriptions. This is one of the steps in the legal development of the two. But a few years ago when the pharmacists began an agitation for legislation that provide pharmacists' licenses for pharmacists only, including such physicians as had been trained as pharmacists, the organized medical profession realizing their point well taken joined with them in endorsing to the legislature a revision of the laws in harmony with their demands. We recognized that certain abuses had crept in under the existing system and that in certain instances hardships are suffered.

Now, you as high-grade and ethical pharmacists and druggists must realize that certain abuses have crept into the conduct of your business that militate against the physician and the public. Counter prescribing straight out or by using memorized prescriptions and the prominent advertis-

^{*}Read before the twelfth annual meeting of the Florida Pharmaceutical Association, at Atlantic Beach, June 10, 1915.

ing of uncertain forms of proprietaries that tend to lead the patient to self-diagnosis and to self-medication. (I refer to the exclusive agency preparations), should be banished by you. The least harm from that nefarious business is that it robs the doctor of his legitimate dues. The greatest harm is the false security into which it leads the patient. When he finds a guaranteed cure for headache prominently displayed as is put out by various manufacturers, and takes it, he may be masking a leading symptom of serious kidney disorder that if seen by a physician in time might result in relief. A cough which would lead the doctor to make a thorough examination of the lungs and heart is treated by an advertised remedy and months later the physician finds his patient well advanced in tuberculosis or cardiac disease. And on ad infinitum.

The federal government has made the word "cure" untenable in the armamentarium of the advertiser. It cannot appear in the matter that goes through the mails and have any standing before a court. It is the coin of the fakir and without it he is greatly handicapped. But today in walking into many of the highest-class drug stores in the state, operated by pharmacists of unquestioned integrity and whose ethics along other lines are above reproach, we are confronted by "guaranteed cure" placards prominently placed so that the buyer may not fail to see them. Now, if there is one point in therapeutics more thoroughly determined than any other, it is the futility of guaranteeing a cure of any malady. The carpenter can guarantee to saw a piece of lumber, according to a definite plan, but we cannot guarantee results from anything therapeutic, not even so simple a thing as a dose of castor oil. We admit that the word "guarantee," as used in these advertisements, has a slightly different meaning in that it is intended that the price is to be refunded in case of failure to cure, but it rarely ever is so stipulated and the patient does not so understand it. Besides the patient is not looking for his money back, he is looking for relief. He interprets that word as an assurance of a cure with never a thought of reimbursement in case of failure.

Organized medicine in Florida endorses your effort to eliminate the incompetent pharmacist even though it invades our ranks; and we believe when you have thoroughly digested this matter you will join us in trying to eliminate the incompetent practitioners of medicine even though it prohibits prescribing by the pharmacist or by the manufacturer through his exclusive agency preparations.

The moral standard of the drug stores in Florida is to be commended. I believe the tone is no higher anywhere. Happily the ignominious conditions that exist in some states do not find favor here. While in Chicago some months ago in conversation with a prominent druggist and pharmacist from a western state, he gave the astonishing information that a large majority of the doctors dispensed their own medicines, so much so that many druggists had recourse to the selling of whiskey, etc., in order to live. They did it within the law, he said, by requiring a prescription for it. This pharmacist wondered why the physicians filled their own prescriptions. We recognize, of course, that in your work just as in ours, the man who prescribes for himself a high standard of business ethics and lives up to its stands to lose in a measure. It is an unfortunate commentary on our system that the road to greatest profits is in many instances the road to greatest dishonor. The temptation is ever present to us all to relax our methods in the hope of rewards that do not come frequently to the rigidly upright and honorable dealer.

ASSISTING NATURE.*

Mary Freeman, M. D., Perrine. Fla.

In college days it was interesting to note that the surgeon whose success was termed "lucky" by the students, was the one whose first assistant gave undivided attention to supplying him with just the right instrument simultaneously with the need of it. He did not have to say "Sponge, please," or call the catgut number; it was there on time.

I want to be such an assistant to Nature.

While still in the primary department, having less than three years' actual work in general country practice, the study is fascinating.

As far as my limited experience has gone, when the average patient comes for medical advice, it is on elimination that the first assistance is needed. The primary fault may have been in diet, exercise, anxiety, dissipation, or infection. As long, however, as Nature can keep the waste products cleaned out rapidly enough to prevent clogging the system, or interfering with the normal reaction of the secretions and body fluids, she will keep the patient feeling independent of medical assistance.

Physiology teaches us that during the activity of a muscle, its tissue changes from a neutral to an acid reaction, from the development of sarcolactic acid; the degree of acidity depending, to some extent, on the duration of the contraction period. We see an illustration of the change in reaction even in the saliva, after prolonged exertion, in the newly delivered woman. The longer and more difficult the labor, the more marked the acid reaction. Suspecting that the sooner the secretions return to normal, the less danger there is of complication, sodium bicarbonate in 15 gr. doses is given two or three times daily until the saliva is alkaline

in reaction. The time varies from twenty-four to seventy-two hours.

Two cases of diabetes showed much greater tendency to acid saliva whenever they could find something to worry about. It was always necessary to increase their doses of sodium bicarbonate at such times in order to keep them improving. After about eighteen months' persistent work, Nature appeared to gain her ability to keep the secretions normal and sugar entirely disappeared in both cases. Besides the alkali, the only other medication was laxatives and cathartics enough to insure thorough daily evacuations (podophyllins and cascara sagrada appeared to suit these cases and iron quinine, and strychnine as a general tonic. Sometimes it contained Fowler's solution also. At other times it was cod liver oil, but the tonics varied as indicated. It was the marked improvement in the feelings of the first diabetes case, when the saliva was kept normal in reaction, that prompted the use of blue litmus on the saliva as part of routine work in examination. It appeared to be such an accurate indication in his case as to whether constructive or destructive metabolism was prevailing.

Another class that showed by the reaction of the saliva, whether they were gaining or losing, was of infected wounds with marked constitutional disturbances. Three had temperatures of 103 to 104, while one was subnormal. All had rapid pulses, 120. One evidently was a gas bacillus infection, as numerous blebs formed, and the whole hand had the appearance of a spreading gangrene. They all recovered, but not until the saliva was made alkaline did they show encouraging symptoms.

We recognize hot and cold flashes, when occurring in connection with wounds, as an indication of septicemia and proceed to hasten elimination. Why may not the hot and cold flashes at menopause be produced by faulty elimination?

In these cases, Nature, missing the tonic of a subsiding internal secretion, not only

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

needs eliminatives but she also needs tonics suited to the individual case.

Several cases, prompted by feelings of depression, hot and cold flashes, have come asking, "Doctor, is this the change?" They have constipation, scanty urine, and acid saliva. After ten days or two weeks on eliminatives and tonics with either enough lithium citrate, or sodium bicarbonate to assist in making the system more alkaline, they cease to dread their advancing years. The few cases of real menopause that have come under observation have also been relieved of distressing symptoms by the same method.

The eliminatives and tonics have to be selected to fit the individual case, bearing in mind any specific or other chronic condition that may exist, but the principle is the same. Assist Nature to keep the house clean while she is shifting the household arrangements.

MALARIAL HAEMATURIA.*

J. D. Bennett, M. D., Clearwater, Fla.

Ever since mankind became a factor in the economy of the world, the question of the right or wrong way by which certain results may be accomplished has been a matter for discussion. Down through the history of the ages, now and again one would arise and proclaim with trumpet voice, "This is the way, walk ye in it;" another would assert with equal positiveness, "There is a way that seemeth right unto a man, but the end thereof is death."

In nothing has this been more true than in the arguments that have arisen, acrimonious and otherwise, concerning this much vexed question of giving quinine in malarial hæmaturia, which has been troubling our physicians for the past seventy-five years or more.

In Missouri, along the banks of the Mississippi, there were two classes of doctors who contended, in the old days, with much virulence. The eclectics opposed the use of this drug in this particular form of malaria, while the loyal followers of the Jefferson Medical College considered it the "sheet anchor" in all cases of the disease, and they used quinine in hæmaturia, with most disastrous results, while the others, as we were pleased to call them, "the root and yarb doctors," rejected it, and gave in its stead violent purges followed by sweating with boneset tea, with pretty fair success. Old Dr. Turner, of sacred memory, gave jaborandi, and sold his cures at \$1.25 each.

Malarial hæmaturia cannot of itself be called a distinct fever, but only a variety of malarial fever, with hemorrhages from the kidneys. It is rarely found away from the swamps and rivers of the south, and is practically unknown north of latitude 35.

The hæmaturia is the first symptom of the fever, and may be called pathognomonic. This may set in at any time, or may begin with the fever. Frequently it comes on after a few large doses of quinine are given in a severe case of malaria.

The system seems to be unable to throw off the quinine by the skin, and the kidneys are taxed beyond their strength, becoming weakened, and to some extent decomposed, or depraved, resulting in hemorrhages; the blood oozing from the kidneys and passing off with the urine. If the hemorrhage is small, the urine is a dark reddish color, and has the appearance of water from a smoky roof. If it is extensive, the urine has almost the appearance of blood. This bloody urine may be present at every passage of the urine, or may be absent until the next paroxysm of fever, when it again occurs. These hemorrhages are very exhausting and unless soon relieved will almost certainly prove fatal.

Treatment. I begin the treatment like any other form of malaria; I administer a

^{*}Read before the forty-second annual meeting of the Florida Medical Association, at DeLaud, May 12-14, 1915.

brisk mercurial purge until free actions are obtained. This is followed by some febrifuge, as the bromides of soda or potash; nitre, and gelsemium. About four hours before the recurring chill or fever, a pretty stiff dose of pilocarpine or jaborandi is given. The pilocarpine is much the easiest on the stomach, and is preferred. This brings on a free perspiration which will usually prevent the recurrence, or greatly modifies it. This is repeated each day until the symptoms disappear.

In giving pilocarpine, I prefer to administer it hypodermically, giving ¼ grain, or less, according to the case; in weak or run-down cases it is frequently necessary to administer an arterial stimulant, such as digitalis, strychnine, or nitro-glycerine to overcome the depressing influence.

In a practice of twenty-five years, I treated over a hundred cases of this malady with unprecedented success. This is no new thing to stir the populace, but an old and tried remedy; and if I can pursuade my brothers in the profession to eschew quinine in this disease, and give the patient a chance for his life, I will feel that my mission in life has been accomplished, and like Simeon of old will say, "Now let thy servant depart in peace."

WEANING FROM MORPHINE.

H. Mason Smith, M. D., Chattahoochee, Fla.

At this time when thousands of people are in distress brought about by recent legislation, which has cut off the supply of sedative drugs to which they have become addicted, and with which their systems have for years been saturated, for which every fiber of their being is crying, and their desires are so strong that the non-abatement causes actual suffering, it behooves one to study the best method by which this suffering may be ameliorated, and these thousands cured of the habits that have burnt out their moral characters and made their bodies phy-

sical wrecks. Never before has the situation been so promising for favorable results in the treatment of this class of patients. The passage of the Harrison Narcotic Bill has made it so difficult for the "addicts" that even some of the old, confirmed ones, who at the best have but a short time to live, are seeking treatment and cures, so that they may spend their remaining days in comfort and devote their remaining energy to something other than an effort to obtain morphine. After treatment has been administered to a patient and he is considered as cured and absolutely free from the drug, the probability of relapses, which has heretofore been so large has been reduced to a minimum, as the temptation has been removed from the individual whose will power has been so weakened by a character-destroying drug that he has no power of resistance.

The treatment of morphinism has been considered impractical outside of an institution, mainly for the reason that absolute control of the patient must be secured before treatment can successfully be carried out. Removal from home and from the old environment, where sentiment may come into play, and the proper restraint may be influenced by the will of the patient, so an institution has been considered necessary to secure this control. In an institution the contact with strangers, the firmness with which they are dealt and the superior equipment for carrying out hydro and electrotherapy and other measures are stimulating to the patient. While these are facts that cannot be refuted, we have at the present a different situation to deal with. The drug has already been withdrawn by legislation so the need of institution restraint for the withdrawal has been lessened and the patient can be treated at home for the withdrawal symptoms, and for chronic morphine poisoning. The addict after having suffered the tortures of withdrawal symptoms, on account of their inability to get the drug, are clamoring for relief and becoming voluntary patients anxious and willing to undergo any kind of treatment that will afford them relief. There are more of these cases now than our institutions can accommodate, and treatment at home will of necessity have to be instituted to give relief in numerous cases.

The treatment that I propose to submit for your consideration has been my routine at the Florida Hosiptal for the Insane, and one which has been followed by a comparative small number of relapses even before we had the support of the Harrison Narcotic Act. It seems to me that on account of the simplicity of the treatment, it is the most practical method of relieving an individual from morphinism either in an institution or at home.

The physiological action of the continued use of morphine is well known to us all, but for the purpose of reference I wish to call attention to its constant inhibitory action on all of the glands, especially the glands of the stomach. On the withdrawal of morphine, there is an excessive action of these glands which have been inhibited for so long. The glands as well as the tissues become loaded with toxins and the end products of the morphine salts. Whether this toxemia in itself does not aid in creating the abnormal desire for morphine is a matter worthy of thought as the extreme morphine craving leaves the patient, after a thorough course of elimination has been carried out by all the emunctories. It may be that the process of elimination has stimulated the glands to such activity that the effects of morphine are not needed for the comfort of the patient, but I rather think that the toxemia and end products of morphine stimulate the desire for the drug and the elimination of these will relieve it. Hence, my treatment is purely eliminative, in which the eliminative measures are also indicated for the relief of the unpleasant withdrawal symptoms.

The immediate, rapid and gradual withdrawal of morphine all have their advocates. In selecting the method humaneness and effectiveness are to be taken into consideration. We will consider here only the immediate withdrawal as that is the method with which I have had best results. It appeals to me that the quicker the toxin and its end products are eliminated from the system the quicker the unpleasant symptoms and the intense craving for the drug will be allayed, and the sum total of suffering will be less in the end.

The greater part of the elimination is to he carried out through the skin by means of packs. My routine is to give a daily hot pack during the morning from two to three hours according to the strength of the patient. These are kept up for eight or ten days according to the severity of the addiction and the endurance of the patient. When the inhibitory action of opium is taken away there is an excessive secretion of the glands in the stomach and intestines and a resulting diarrhea which is very copious. This is not checked but an ounce of sodium phosphate is given each morning for its eliminating and depleting effect. This is continued until the depleting effects desired have been obtained when a dose of castor oil is given and purgation is discontinued, then there is a cessation of the diarrhœa and the action of the intestines becomes normal. saline cathartic would answer for this phase of the treatment but the hyperchorhidria has to be combated with some alkaline so the sodium phosphate answers for both. This about completes the medication of the treatment unless stimulation is needed, but as little medicine as possible is given in order that the patient may realize his independence of any drug. If the patient shows signs of collapse, that strychnin will not counteract, a dose of morphine is given, but dangers of collapse from the cutting off of morphine is small. In over a hundred cases treated at the Florida Hospital for the Insane it has been necessary to administer a dose of morphine in only one. This was in a man sixty years old with mitral incompetency, who had been a habitue for twenty-five years and who for the last seven or eight years had taken from sixty to one hundred and sixty

grains daily. One half grain was given to him forty hours after treatment was instituted.

Besides elimination the hot pack serves us in two other capacities. For the severe aching pains which always follow the withdrawal, the hot pack is almost a specific. This relieves muscular pains entirely when supplemented by massage and faradism which has the same effect on the annoving tired feeling in the legs that exercise has. Then the hot pack is a sedative to the nervous system and combats the insomnia which is a constant symptom. For the relief of the insomnia the packs which are given every morning are supplemented at night by a hot bath for about thirty minutes or an hour, after which a warm glass of milk is given to the patient. Out of our series of cases none have been annoyed with insomnia after the first night of the treatment, and even then most patients sleep some. Some authors claim that insomnia following withdrawal is due to the excessive acidity of the stomach, and no doubt this does exert some influence; hence, the sodium phosphate relieves that cause.

As stated before, this treatment is continued till the system is thoroughly depleted and in the judgment of the physician elimination has been carried sufficiently far. We have never kept it up over ten days and usually six or seven is sufficient. The patient usually loses from ten to twenty pounds in this treatment, which he usually gains back and also twenty to thirty pounds more in a short time, when the treatment has been successful.

From the standpoint of humaneness this treatment appeals to me as being much better than the gradual withdrawal of morphine and administration of belladonna or hyoscine to a degree of delirium in which they are kept for several days, and from which there are resulting after symptoms. The symptoms resulting from immediate withdrawal when treated in the manner outlined above are not so unpleasant as the belladonna delirium.

The psychic influence of this treatment is also effectual for the patient realizes that he has been carried through an almost regenerating process and he naturally has confidence in the results of the treatment which is a material support to his weakened will power.

The next phase of the treatment is tonic and rest and liberal diet. The patient is usually retained at the institution till he has gained fifteen or twenty pounds more than he weighed on admission. This usually requires about one month, after which the patient is sent home with the advice to get out of the old environment which is associated with his doping, and wherever possible changes in occupation are advised. In the cases of brain workers we advise physical and out-of-door work and also a change of scene to a place where temptations are less strong, and in manual laborers lighter work with longer hours of rest is advised and much sleep is insisted upon.

PROPAGANDA FOR REFORM.

Swan's Rheumatic Bacterin (Mixed), No. 47.—According to the manufacturer, The Swan-Myers Co., Indianapolis, Ind., this preparation contains pneumococci, Friedlaender's bacilli and streptococci (polyvalent). The Council on Pharmacy and Chemistry refused to admit this vaccine to New and Nonofficial Remedies because there is no satisfactory evidence that either the pneumococcus or Friedlaender bacillus is concerned in the etiology of acute or chronic rheumatism or rheumatoid arthritis and no conclusive evidence that the streptococcus is an etiologic factor. (Jour. A. M. A., Nov. 6, 1915, p. 1662.)

ELIXIR IODO-BROMIDE OF CALCIUM COMP.

—The Tilden Company, New Lebanon, N.
Y., and St. Louis, Mo., sells "Elixir Iodo-Bromide of Calcium Comp. without Mercury" and "Elixir Iodo-Bromide of Calcium Comp. with Mercury." The latter is said to

contain, in addition to the ingredients of the former, 1-100 gr. mercuric chloride in each fluidram. The "formula" of the elixir without mercury is stated to be: "Salts of Iodine, Bromine, Potassium, Sodium, Calcium, Magnesium with Stillingia, Sarsaparilla, Rumex, Dulcamara, Lappa, Taraxacum, Menisperum." Advertising circulars give "formulas" which differ somewhat from the preceding. None of the "formulas" gives the quantities of all of the several constituents. The Tilden Company asks physicians to depend on these preparations in the treatment of syphilis. While it seems incredible that any physician would jeopardize the health—even the life—of a patient by accepting this advice, the fact that certain medical journals advertise these preparations with the caption "The Conquest of Syphilis" made it incumbent on the Council on Pharmacy and Chemistry to record its condemnation of the employment of these unscientific, semisecret mixtures. (Jour. A. M. A., Nov. 6, 1915, p. 1662.)

THE AUTOLYSIN TREATMENT. — There were strong evidences from the beginning of a commercial spirit in the exploitation of this treatment. Letters sent to physicians further illustrate the method of promoting this unproved and possibly dangerous treatment. Dr. Richard Weil, who had the opportunity of personally witnessing the application of this compound in a long series of cases at the General Memorial Hospital, expresses the belief that autolysin is useless, that it adds nothing of value to the methods now generally accepted, and that it often aggravates the sufferings and accelerates the death of the patient. (Jour. A. M. A., Nov. 6, 1915, pp. 1641, 1647 and 1662.)

LACTOPEPTINE AND ELIXIR LACTOPEP-TINE.—Lactopeptine is sold under the claim that it contains pepsin, diastase, pancreatin, lactic acid and hydrochloric acid. In 1907 the Council on Pharmacy and Chemistry reported that Lactopeptine was practically inert—"essentially a weak saccharated pepsin," devoid of tryptic activity. An examination made by the Council in 1913 confirmed the previous findings. Nearly four months after publication of the last report, the manufacturers protested against the report claiming that Lactopeptine possessed pancreatic activity and contained "loosely combined" hydrochloric acid. The Council now reports that an examination of the market supply demonstrated that a few recently manufactured specimens showed slight (therapeutically negligible) tryptic activity, but that most showed none; the amount of hydrochloric acid was insignificant. Again declaring Lactopeptine and Elixir Lactopeptine ineligible for New and Nonofficial Remedies, the Council points out that, whatever the tryptic activity of the mixture, it is therapeutically useless. Mixtures of pepsin and pancreatin are irrational. The two substances are not indicated in the same conditions nor can they act together. Under physiologic conditions such mixtures are chemically impossible. In a liquid medium the two substances destroy each other. (Jour. A. M. A., Oct. 23, 1915, p. 1477.)

Varlex Compound.—This is an alleged cure of the liquor and tobacco habit of the "prescription fake" variety. Advertisements advise the secret administration of: Water 3 ounces, muriate of ammonia 20 grains, Varlex Compound one package, pepsin 10 grains. The A. M. A. Chemical Laboratory reports that Varlex Compound consisted of approximately 97 per cent milk sugar and 3 per cent moisture. (Jour. A. M. A., Nov. 6, 1915, p. 1663.)

ALKALOL. — Analysis in the A. M. A. Chemical Laboratory indicated Alkalol, which is advertised as useful in inflammations of the nose and throat, to be essentially an aromatized, weakly alkaline, saline solution containing a small amount of chlorate, probably potassium chlorate; it yielded about 2 per cent of solids, mainly alkali chlorid, chlorate and bicarbonate; of this 2 per cent about one-half was bicarbonate. (Jour. A. M. A., Nov. 6, 1915, p. 1665.)

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ANOTHER TRAGEDY OF UNPRE-PAREDNESS.

In a football game at St. Louis several weeks ago, one of the players received an injury to the cervical spine and was taken to the City Hospital. After careful examination it was determined that surgical interference was not indicated, in that fragments of the vertebra were not then pressing on the cord; that the character of the injury made the patient's conditions practically hopeless, and that treatment indicated was absolute quiet and immobilization. The parents of the boy were frankly told the seriousness of the injury. In the face of these conditions, according to the Journal of the Missouri State Medical Association, an osteopath who had been engaged by the father wanted to treat the patient immediately. The surgeon in charge, fearing injudicious handling which would deprive the patient of any existing chance for recovery, refused to permit the osteopath's treatment. The osteopath, accompanied by the boy's father, then obtained an order from the mayor to the hospital commissioner, relieving the hospital physicians from further responsibility and permitting the osteopath to "try to save the patient as the doctors had given him up." Says the Missouri journal:

"For five days the patient had been resting quietly with a gradual lessening of the effects of the frightful shock from the hemorrhage into the cord. Then the osteopath applied a jury-mast to the victim's head, which resulted in renewed shock, a scream and a plea from the patient to remove the apparatus. The patient became evanotic. The extension was removed on account of the patient's bad condition. Death followed about two hours later."

The necropsy report showed that death was due to "hemorrhage into the cord and fracture of the cervical vertebræ," thus supporting the diagnosis of the physicians and

proving that their treatment had been correct. The *Journal* continues:

"Now it seems clear that the mayor and the director of public welfare actually took charge of a poor unfortunate who was receiving the best possible care which could be provided in a metropolis and noted medical center. They dismissed the skilled attendants who were honest and had informed the relatives of the actual state of affairs and turned the patient over to the distracted and deluded father and mother and an arrogant, boastful osteopath."

Here, it seems, is another instance in which the delicate watch was given over for repairs, not to a skilled watchmaker, but to a blacksmith. The change of the patient from a condition of quiet restfulness, with its possible chance for recovery, to one of sudden pain, shock and speedy death was too prompt to be interpreted otherwise than as due to the use of methods entirely unwarranted by the condition of the patient. The safety of the patient demands that whoever assumes the role of the physician must have had sufficient medical training to know when such treatment is best and when it is bound to do more harm than good.— Jour. Amer. Med. Ass'n.

THE MADNESS OF SPORT.

A dictionary defines sport as a "particular game or play pursued for diversion." Also as "a mockery or object of derision." One may wonder in which of the foregoing categories some recent exhibitions belong. In a recent automobile contest in which the winner exceeded an average speed of 100 miles per hour for more than three hours, the reports of the finish tell that "the driver, overcome by the roar of his machine, was unable to hear for several minutes and acted otherwise like a deranged man." This type of performance also reminds one of the dangerous and thrilling midair stunts in which a few widely advertised aeroplane enthusiasts have engaged, sometimes at the sacrifice of their own lives. Some of this modern sport mania seems to deserve the condemnation which has been applied to certain features of the competitive athletics practiced in schools and colleges. No one will gainsay the value and pleasure of outdoor exercise graduated to suit the needs of every individual throughout life. But the species of over-doing called for in the intense competition of the great contests of our schools and colleges can no longer be defended by platitudes regarding the alleged psychologic value of its competitive features. The desire to win at any cost must be criticized, not only from the standpoint of unethical practices between opponents, but also with consideration of the insults which the strain of training and final competition may place on even normal organs such as Dr. Wilson of Philadelphia the heart. sounded a warning concerning what is occurring on our athletic fields, when he said: "Trainers should be taught just what the collapse of today means in the future of the athlete. Some day the college authorities must of necessity conclude that no form of athletic events is sane that demands of the participants the semi-conscious state of heart exhaustion at its conclusion." School and college authorities are singularly indifferent to the question of physiologic fitness and consequences in the case of students who are, in a sense, their wards. Athletic associations and college groups need to be reminded in emphatic and authoritative way, in the words of Wilson, "that no form of athletic event is sane that demands of the participants the semi-conscious state of heart exhaustion at its conclusion." Has not the time arrived to call a halt on "insane indulgence" in sport? Commenting on the reckless forms of sport which seem to bewitch by the terrible dangers that they court, the Journal of the American Medical Association says, "Little is gained for the progress of motoring or the science of flying by the daredevil types of performance which are challenged

to fate. Let us cease to dignify such exhibitions with the designation of sport. As has been said, events which depend for thrill on the nearest possible approach to death by the actors in them represent the degeneracy which overtakes sport and makes madness of it."

THE PUBLIC LAUNDRY.

If our industrial procedures and household practices remained unchanged from one generation to another, it might become far easier than it has been to control disease and stamp out familiar infections. Thus, when laundry work was largely confined to the home, the possibility of infection was limited to a small group, and the opportunity for exposure to contagion was easily appreciated and provided for. Today the handling of soiled clothes is being transferred more and more to special plants in which materials from many homes and still more individuals are brought together where employees come into contact with it. The possibility of infection under such conditions must vary for specific diseases, and depends on the probable readiness with which the micro-organisms concerned are transferred by soiled linen, and further on the efficiency of the laundry processes as a mode of sterilization. It is doubtless true that some of the more important disease germs are transmitted from individual to individual without any intermediate conveying device; nevertheless there are many infections, such as typhoid fever, venereal diseases, etc., which are known to be transmitted through fomites. So long as typhoid fever can be charged to the cook who has handled the food, it is not difficult to conceive of a similar transmission through the laundry worker. The high temperature, soap, washing soda and other chemicals to which clothes in the laundry are subjected in the washing process are responsible for a sterilizing action. It is said that there is no danger to public health from "mixed washing" of clothing with contaminated articles.

It is pointed out, however, that while the washing process practically sterilizes the clothes, the reinfection of clean linen is possible when it is sorted and counted in the same room with soiled linen. Clean linen, when exposed to infection through contact with soiled linen, may disseminate infection. The Journal of the American Medical Acsociation therefore says that soiled linen ought not to be received, sorted or marked in rooms in which clean linen is kept. Eating and drinking should be prohibited in rooms in which soiled linen is manipulated, and laundry workers should be instructed concerning the latent hygienic dangers which they may encounter in their work. Sanitary measures involving personal hygiene are essential for their own welfare as well as that of the public served.

WHAT IS LIQUID PETROLATUM?

"The use of liquid petrolatum in chronic constipation, which has recently become the vogue, has naturally been commercialized; as a result, also naturally, claims of superiority of one brand over another have been made. Some of these claims may have been well founded; others certainly are not. Some have claimed superiority for those products made from Russian oil over those made from American oils. As it was generally believed that naphthene hydrocarbons predominate in Russian crude petroleums, and paraffin hydrocarbons in American crude petroleums, it was assumed that the petrolatums derived from these sources differed from each other in like manner. Both the naphthenes and the paraffins are chemically inert; but some unexplained therapeutic superiority has been assumed to reside in the naphthenes. Consequently, it has been urged that the American liquid petrolatums should not be used internally. So far these claims and counterclaims have been based on much theory and little fact." The Journal of the American Medical Association publishes in its issue of January 1, 1916, a contribution by Benjamin T, Brooks, Senior Fellow in charge of petroleum investigations at Mellon Institute, Pittsburg. "Brooks calls attention to the fact that Marcusson in 1913 pointed out that most of the so-called 'mineral oils' used for therapeutic purposes contain no paraffin hydrocarbons whatever; that they consist solely of naphthenes and polynaphthenes. Brooks confirms this statement so far as American liquid petrolatums are concerned. He states," says *The Journal*, editorially, "that many American petroleums, such as most of those from the Gulf region, are like the Russian in containing no paraffin; and that, in the case

of those petroleums that do contain it, the customary refinery method of removing paraffin is sufficient to produce true naphthene and polynaphthene petrolatums. 'The claim that only Russian oils belong in this class,' he says, 'has no basis in fact and has been advanced presumably for business reasons.' The name 'paraffin oil' applied to these liquid petrolatums, then, is a misnomer. The new name, 'white naphthene oils,' as suggested by Brooks, seems superfluous, however, since the pharmacopæial title, 'liquid petrolatum,' is subject to no such objection."

Cancer Department

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

THE CAMPAIGN AGAINST CANCER IN MISSOURI.

The most recent addition to the many agencies, national and local, now engaged in the warfare on cancer is the Department of Preventive Medicine of the University of Missouri. This department has just published in the University Bulletin a special article on the early diagnosis and treatment of cancer by Dr. F. A. Martin, instructor in pathology. The purpose of this bulletin is to call the attention of its readers in Missouri and elsewhere to the campaign for the education of the laity which is being carried on by the American Society for the Control of Cancer, the American Medical Association and other national and state organizations, and to give a brief general survey of the cancer problem as a phase of preventive medicine.

The knowledge and skill of surgeons in the treatment of cancer has progressed, according to the bulletin, almost to the limits of what is possible and if the percentage of cures by this, the only method of treatment which offers reliable hope of cure is to be increased, the patients themselves must cooperate by seeking earlier diagnosis and treatment. On examining the histories of a large number of cases it has been found that the patients whom the surgeon failed to cure were those who came to him late in the disease when the cancer had spread to such an extent that to remove all the cancer cells would have required an operation so great that in itself it would be sufficient to cause the death of the patient. On the other hand it is found of another group of cases which sought treatment soon after the cancer was noticed that 100 per cent were cured. To increase the percentage of cases treated early the University Bulletin urges that laymen learn the meaning of cancer and its first warnings in order that they may go to the surgeon in time when the cancer is still in the early stages and the chance for cure is high.

Among the many facts already known about cancer, perhaps the most important is that the disease nearly always begins in some form of abnormal tissue. This abnormal tissue, which is often easily recognized, may have existed for only a few months or it may have been present from early childhood without causing trouble, only to change into cancer in later life. To these bits of abnormal tissue or groups of cells, has been given the name of "precancerous lesion." The Bul-

letin says that not all such conditions develope into true cancers, but most of them should be kept under careful observation by a competent medical advisor and removed as soon as there is real danger of malignant disease. This is the only known method of preventing, as distinguished from curing, cancer and the Missouri Bulletin describes carefully the various forms of precancerous lesions which should be regarded with suspicion. Among these are pigmented moles, cracks on the lip, blisters, scabs and similar persisting abnormal conditions of the skin, Probably only a very small proportion of these conditions become cancer but when moles, for instance, are so located that they are subject to constant irritation and when in later life they change in color and appearance and begin to grow it is time to have them promptly attended to. Moles and warts should never be treated with caustic but the whole lesion together with its socalled roots should be removed. When a burn on the tongue or lip from smoking does not heal within a few months it is a source of danger. Generally speaking, the removal of precancerous lesions is a trivial operation requiring only local anesthesia.

After true cancer has developed it is still possible to cure a large percentage of cases if the surgeon is given a fair chance while the disease is still local. All cases of cancer are local in the beginning and may remain so for a few weeks to several months. It is during this period that surgical treatment offers the possibility of practically 100 per cent of cures. Unfortunately for the patient pain is so rare at this stage of the disease and the conditions seem so trivial that in a great number of cases the opportunity to be saved is forfeited by the delay. In cancer of the breast, for instance, the cases cured by the late operation amount to about 30 per

cent, but by an early operation at least 80 per cent are saved. If every woman who is not nursing would go to a surgeon within 24 hours after she finds a lump in her breast, 90 per cent of the cases of cancer of the breast would be permanently cured.

Cancer of the tongue is perhaps the most malignant and cures by the late operation are few in number. If a small ulcer appears on the tongue consult a surgeon at once. When such an ulcer is produced by a ragged tooth, consult a dentist first and then if the ulcer does not heal within a short time after the cause has been removed it is a surgeon's task.

In almost all the common forms cancer is connected with some kind of irritation. Gall stones, for instance, should be removed since it is established that from four to fourteen per cent of all cases are followed by cancer.

Cancer of the uterus gives early warning by a discharge of an unusual character at an unusual period and unusual duration. The removal of the uterus is not a dangerous operation and if the disease is recognized at an early stage the life of the patient can be saved.

The Bulletin issues an emphatic warning against quacks and their bogus testimonials, pointing out that their method of deception lies mainly in the diagnosis. There are so many conditions closely resembling cancer that the average layman can not distinguish among them, and it is behind such conditions which are not cancer and which would tend to heal without treatment that the "cancer specialists" take their stand and make their false claims.

The Department of Preventive Medicine will supply copies of this cancer bulletin, Medical Series No. 9, upon request to the University of Missouri, Columbia, Mo., as long as the supply lasts.

OBITUARY 213

Obituary

WILLIAM P. SPRATLING OF WELAKA

Doctor William P. Spratling died at Welaka, Fla., on December 22d. His death was due to the accidental discharge of his own gun while hunting. Doctor Spratling was born in Alabama in 1864. He entered the United States Marine Hospital Service where he remained for two years. At the expiration of this service he became Superintendent of the Asylum at Morris Plains, N. Y., and later spent fifteen years as Medical Superintendent of the Craig Colony for epileptics at Sonia, N. Y. He later practiced his profession in Baltimore, Md., devoting himself to nervous diseases and more especially epilepsy. For a number of years he was on the Faculty of the P. & S. of Baltimore. He came to Florida four years ago, finding it necessary to retire from active work on account of a nervous breakdown. Spratling was of a pleasing personality and to know him was to love him. He will be greatly missed by the profession in Florida.

COMMUNICATION

NOTICE.

To Prospective Essayists for the Arcadia Meeting of the State Medical Association.

The scientific program committee is anxious to make the next program one which will do credit to our large and growing association, both in the subject matter of the essays and the dispatch with which they are delivered and discussed.

It is manifestly impossible to arrange an orderly program when the titles of the

papers are sent in at the last moment; therefore all members who intend preparing papers are requested to send in the title of their paper with the names of one or two members whom they wish to be asked to open the discussion. The program will be arranged as nearly as possible into groups of papers, and preference in position on the program will be given those whose titles are sent in first.

Scientific Committee:

J. Knox Simpson, Chairman, Jacksonville. Fred J. Waas, Jacksonville. Thomas Truelsen, Tampa.

Reviews from Current Literature

TREATMENT OF WOUNDS

Sherman, William O'Neill: A Standardized Treatment of Wounds, Report of 77,000 Cases. Am. Jour. of Surg., Vol. XXIX, 1915, p. 448.

Any paper by Sherman on the treatment of wounds is worthy of most careful consideration; this paper particularly since it embodies his conclusions based on over 77,-000 cases. In commenting on the fact that, in general, satisfactory progress has not been made in the treatment of wounds he states, "The Industrial Compensation Commission of New York state reports that seventeen per cent. of the cases applying for compensation are infected. We can assume that other states would show a like percentage of infections. This is, indeed, a rather shocking state of affairs and one that should be speedily remedied. The vast majority of these infections are due to ignorance, or carelessness, on the part of the injured to report promptly for treatment; lack of efficient surgical organization and equipment to render adequate treatment; or even carelessness on the part of the attending physician. The short-comings of the profession can hardly be attributed to ignorance of such elementary principles. When we consider that it takes three times as long for an infected case to recover as a non-infected case. the economic phase must be apparent to everyone."

"We frequently find doctors responding to emergency calls with a handbag which contains unsterilized instruments and dressings, who attempt to suture and treat wounds with these infected materials, without any attempt at surgical cleanliness. Efforts should be made to discourage this practice. It is not unusual to see a few bichloride tablets dissolved in a basin of ordinary tap water, this being used instead of sterile water, with apparent indifference on the part of the doctor. If it is impossible to secure surgical cleanliness at the place of accident, no attempt should be made to treat the wound other than to combat shock or hemorrhage and to protect the wound from further contamination, until more favorable surroundings can be secured. The probing of wounds and examination by unwashed hands should be vigorously condemned."

During five years Sherman and his assistants have handled the injured of 250,000 employees in the iron and steel industry, and in caring for this great number of men he has made an effort to standardize the treatment of wounds, though allowance must always be made for individual condi-

tions, such as the nature and gravity of the injury, physical condition and home surroundings of the patient, equipment of dispensary, hospital or surgeon, surgical skill, and willingness of patient and friends to cooperate in the treatment.

He gives the following directions for the treatment of open wounds:

- (a) Cover wound with sterile gauze, cleanse surrounding area with tincture of green soap and sterile water.
- (b) Shave surfaces covered with hair, two or more inches from wound.
- (c) Cleanse surfaces covered with grease with benzine or gasoline.
- (d) If iodine dressing is to be used, dry shave, but do not wash with water.
- (e) After surrounding surface has been cleansed, remove the compress and cleanse wound with tincture of green soap and sterile water. Thoroughly irrigate with sterile water bichloride 1-2000, cyanid 1-2000 or Ochsner's solution.
- (f) Remove foreign bodies with sterile forceps.
- (g) Remove all shreds of devitalized tissue, but be conservative in doing this.
- (h) Cauterize all punctured and dirty lacerated wounds with pure carbolic acid, followed with alcohol and dress with dry gauze.

Dressings.

Either of the following methods may be used:

- 1. Dry Method: Mop every part of the wound with a cotton wound applicator saturated with a 5 or 10 per cent. solution of iodine and suture as indicated. Swab wound and a few inches of surrounding skin with tincture iodine, apply sterile gauze and cotton and lightly fix dressings with bandage.
- 2. Wet Method: Apply sutures as indicated and dress with sterile gauze saturated with Ochsner's solution (saturated solution boric acid 75 parts and alcohol 25 parts), cover with cotton and fix dressings with bandage. Re-moisten dressing twice in twenty-four hours.

Subsequent Dressing of Wounds.

- 1. Make as few redressings as is consistent with good work.
- 2. Never permit a patient or his friends to remove a dressing.
- 3. If a wet dressing is used, continue until danger of infection is passed.
- 4. If iodine dry dressing is used, repeat iodine, or apply sterile gauze every three or four days, according to the nature of the case.
- 5. Redress with gauze saturated with balsam of peru, either plain or 50 per cent. castor oil wherever indicated.
- 6. In old granulating wounds, stimulate where necessary with scarlet red ointment, silver nitrate, tincture iodine or currettage."

His results are embodied in the following table:

Tota	1		
Oper			Pct. In-
Woun		fected.	tected.
-55,191	Thorough cleansing with t	r.	
	green soap and sterile water	r,	
	the wound being protecte		
	with sterile gauze. Greas		
	and oils removed with ber		
	zine or gasoline; wound in		
	rigated or cleansed with bi		
	chloride 1-1000 or 1-200		
		10	
	solution.		0040
	Dry gauze dressing		.0013
3,043	As above, plus the swabbin		
	of the wound with 7 per cer		
	tr. iodine		θ
7,152	As above, except steril	e	
	water used to cleanse woun	d	
	and a moist saturated solu	1	
	tion borac acid, gauze dress		
	ing applied		.0018
8 639	As above, with exception t		
0,000	iodine and dry dressing		
	were used exclusively		.0011
2.590	As above, with exception of		.0011
9,049			
	Ochsner's solution (75 pe		
	cent saturated boric aci		
	solution, 25 per cent alcohol		
	with constant wet dressing	gs 0	0
77,554		97	.0012
тт.		•	

His most striking conclusion is that the thorough cleansing of wounds with tincture of green soap and sterile water is productive of the best results, but that tincture of iodine has been successfully used in the treatment of small wounds without previously cleansing with green soap. This point, however, must be always borne in mind, that the

cleansing is done with sterile water, sterile soap and brush, and with surgically clean hands in an asoptic manner.

He states definitely that it is dangerous for untrained hands to attempt to cleanse wounds; that by others than an experienced surgeon, the safest method is to simply apply tincture of iodine to the wound and surrounding area and put on a sterile first aid dressing; the injured man is then sent to a trained surgeon at the earliest possible opportunity.

Time has a decided bearing on the prevention of infection; the earlier the case is received after injury, the less likelihood of infection. It is probable that in addition to skilled and careful treatment, the rapidity with which these iron and steel workers are gotten to the surgeons, after injury, is a factor in the production of the remarkably good results obtained by Sherman in this series.

The following bulletin is issued for those giving first aid where a surgeon is not immediately available:

Wound Infection.

Wounds heal very fast if they are clean. When we say clean, we mean not only clean of dirt, but also clean of invisible germs. These germs lie on the skin and often on the tool or whatever causes the wound. When the germs are not cleaned out from the wound at once, there may be enough to cause blood poison.

The best way to prevent blood poisoning is:

- 1. To clean the wound thoroughly at once.
- 2. To keep it clean by putting over it a clean piece of linen which has been boiled, or a piece of sterilized gauze.
- 3. To hold the above firmly in place with a bandage.

The best way to cleanse the wound is with gasoline, using plenty of time and a clean piece of linen to wash with. Clean the skin all around the wound and wash into the wound itself. Then paint the wound and

neighboring skin with tincture of iodine; this kills the germs.

If you have no iodine and gasoline handy, scrub the wound thoroughly for five minutes with soap, hot water and a scrubbing brush. Then wash the wound with alcohol (whisky or brandy if there is no alcohol) and put on a piece of clean linen, wringing wet with alcohol or whisky. Remember that the scrubbing is the most important part of the cleansing of wounds, and do it thoroughly. Don't be afraid of any slight bleeding caused by cleansing. The bandage will stop it.

When there is a plant physician, it is best of all to go to him at once for the treatment of any wound, however small.

Note: Never use shop rags or waste for cleansing or covering a wound. Use only sterile gauze or clean linen which has just been boiled,

(Prepared and approved by the Industrial Hygiene Committee, Distributed by National Safety Council, Chicago, Ill.)

R. C. T.

UTERINE CANCER

Balfour, Donald C.: The Relative Merits of the Operations for Cancer of the Uterus. Surg., Gyn., and Obst., Vol. XXII, 1916, p. 74.

This report is based on a series of 634 cases of uterine cancer operated upon at the Mayo clinic in the preceding ten years.

The author reviews the various procedures applicable in uterine cancer and draws the following conclusions:

"Patients with cancer of the cervix not too far advanced, who are good surgical risks, should be treated by thorough cautery sterilization of the local disease in the cervix, and total abdominal hysterectomy of the Wertheim type.

"When cancer is confined to the cervix, the vaginal outlet fairly lax, and the patient is a poor surgical risk, *i. c.*, obese, with cardiorenal disease, etc., the preferred treatment is the clamp and cautery vaginal hysterectomy.

"In the more advanced stages of the

disease if the patient is a good surgical risk the two stage operation should be done, *i. e.*, the Percy method of coagulation by heat followed after some weeks by total abdominal hysterectomy. If the patient is a poor surgical risk the Percy method should be applied but the abdominal hysterectomy should be considered on its merits in the individual case.

"In most instances in cancer of the body of the uterus a total abdominal hysterectomy should be done. In the small minority of patients with cancer of the body of the uterus who are poor surgical risks, clamp and cautery vaginal hysterectomy may be indicated."

G. R. H.

EXAMINATION DURING LABOR

Holmes, Rudolph Wieser: Rectal as a Substitute for Vaginal Examinations in Labor. Jour. A. M. A., Vol. LXV, 1915, p. 2229.

Holmes emphasizes the dangers of vaginal examination at the time of labor and cites the papers of Kroenig in 1893 and Emil Ries in 1894, which first advocated the substitution of rectal examination for vaginal.

The technic of the procedure is given in detail, the possible dangers noted and the following conclusions drawn:

"The discovery of the possibilities of rectal examination in labor by Kroenig and Ries is one of the most important contributions to modern obstetric medicine of the last generation.

"There must be a complete revision of the chapter on pelvic examination in obstetric textbooks. Adequate presentation of the value of rectal examination must be stated. Vaginal examination should be made subordinate to rectal touch.

"While, at the present time, rectal examination does not give us the means of measuring pelvic size, it is of great value in estimating the factors situated in the posterior half of the bony pelvis.

"In almost every direction, under appropriate conditions, rectal examination is as definitive as vaginal, if combined with abdominal palpation.

"The ease or difficulty of rectal examina-

tions are commensurate to the difficulty which encompass the vaginal, and are dependent on the same factors.

"Rectal examination is an utterly innocuous procedure in labor, whereas vaginal examinations are always potential sources of infection to the woman.

"Rectal examinations are peculiarly appropriate to those women who are to receive the test of labor in relatively contracted pelves when a cesarean section may possibly be needed.

"Vaginal examinations should be made in labor only when, for some special reason, the rectal findings are indefinite or inconclusive.

"The least that can be said of rectal examination is that it permits the conduct of normal labor with the essential elimination of vaginal examination: a decided advance in the technic of the conduct of labor."

G. R. H

SUMMER DIARRHOEA

Bleyer, Adrien: The Relation of Heat to Summer Diarrheas of Infants. Journal A. M. A., 1915, Vol. LXV, p. 2161.

Two hundred and twenty-two infants under two years were studied with a view to ascertaining the relationship between the actual onset of diarrhœa and seasonal temperature. Of this series over half of the babies became ill on days when the temperature was 90, although there were relatively few days of such high temperature during the two summers representing the time of the studies. Most of the babies were rationally fed, and thirty of them were breast-fed Most of them were overburdened with clothing. A baby exposes much greater area of surface as compared to body weight than does an adult. Metabolism is rapid as is heat output, and clothing may interfere materially with heat loss. Infants can tolerate high temperatures, provided they are not overburdened with clothes. It is significant that breast-fed babies and those fed on uncontaminated food may show the effects of high temperature in diarrhœal conditions. J. D. L.

DUODENAL ULCER

Gerdine, Linton, and Helmholz, Henry F.: Duodenal Ulcer in Infancy an Infectious Disease. Am. Journal Diseases of Children, 1915, Vol. X, p. 397.

Notwithstanding the fact that studies during recent years have proven duodenal ulcer to be of not infrequent occurrence in infants the etiology of the condition is still obscure. The authors call attention to the fact, hitherto overlooked, that duodenal ulcers have a decided tendency to appear in epidemic form, manifesting the appearances of true infections. Eleven cases are reported, all of which terminated fatally, and the necropsy findings are appended. In all the ulcers were found diplococci and streptococci.

From one was secured a culture of streptococcus viridans which when injected into dogs and rabbits produced duodenal ulcers. In explanation of this phenomenon it is assumed that the streptococcus producing the condition finds in the duodenum conditions favorable for its activity. This definite causative organism may gain access to the system through the digestive tract or air passages; but by virtue of some characteristics not understood it tends to localize in the duodenum. This same tendency for bacteria to localize in specific tissue has been proven true of streptococcus, isolated from cases of rheumatic fever, endocarditis, appendicitis and herpes zoster, when injected into animals.

The symptomatology of duodenal ulcer in infancy is indefinite, it being practically impossible to diagnose the condition till such complications as perforation or rupture of a vessel have occurred. The prognosis of this condition is always bad. Tranfusion might be of value if promptly performed.

J. D. L.

ANAEROBIC BACTERIA

Ozaki, Y.: Zur Kenntnis der Anaeroben Bakterien der Mundhole (Concerning Anaerobic Bacteria of the Mouth Cavity). Centralblatt für Bakteriologie Parasitenkunde und Infektionskrankheiten. Bd. 76, 1915, Originale 1 Abt., p. 469.

Ozaki states that spirochetes, of varying morphology, are almost constantly found in normal mouths. The pathological significance of these organisms is not clear. The method of studying these organisms is described in detail and consists of a study of spirochetes obtained in anaerobic cultures from material secured under the gums about the roots of teeth. Four generations of subcultures have failed to show pathogenicity for guinea pigs, rabbits or white mice. When large quantities are inoculated subcutaneously an induration takes place which disappears spontaneously.

The morphology of the organism obtained in cultures varies, according to the media in which it is grown, in size and in the number of convolutions. The structure of the organism is best seen when stained by Giemsa's stain; ordinary dyes do not give satisfactory results.

H. H.

SPIROCHAETA BRONCHIALIS

Fantham, H. B.: Spirochæta Bronchialis. Annals of Tropical Medicine and Parasitology, Vol. LX, p. 391.

Fantham has made a study of spirochæte obtained from the pulmonary secretions of patients with symptoms of chronic bronchitis. This organism has been compared with spirochætes obtained from pus inpyorrhæ and in gum boils. The patients where the organism has been obtained have been mostly from the hot dry regions of India, Kartoum.

The spirocheta bronchialis is a rapidly motile organism isopolar, i. e., can return on the same axis in its own path. Some forms are barred and have chromatin dots. The morphology varies a great deal, the average length being about 15 microns, varying between 5 and 27 microns. The young organisms are short while the older ones are long. The organisms are found in the thick stringy mucus from the deeper bronchial regions. The breadth varies from .2 to .6 microns. They are not the same as the treponema. The granules are supposed to be the reproductive bodies.

Fantham speaks of the spirochæta Vin-

centi which occurs in Vincent's angina in association with the fusiform bacilli and states that it is not identical with the spirochæta bronchialis. The spirochæta bronchialis appears more active than the ordinary mouth spirochætes, and dies more rapidly outside of the respiratory tract, while the mouth variety may live for an hour or longer.

The mode of infection is direct and not by means of an intermediate host. The spray contains the germinative coccoid bodies and if inhaled may give rise to bronchial spirochetiasis. They have been found where the bronchial symptoms could not be ascribed to any other cause. The number of organisms is greatest during the attack and subsides with the symptoms. II. H.

VINCENT'S ANGINA

Starke, H. H.: Twenty-five Cases of Vincent's Angina Successfully Treated With Sodium Perborate—Special Report of Three Cases. Annals of Otology, Rhinology and Laryngology, 1915, Vol. XXIV, p. 48.

The author is "struck with the lack of information gained from the textbooks on the subject of Vincent's angina, especially the treatment. Osler (1912) does not treat it as a distinct disease, but mentions it only in connection with diphtheria. (1913) does not mention it. Kerr mentions it, but suggests nothing in the way of treatment. Ballenger, second edition, does not mention it; he takes it up in the third edition, but gives nothing new on the treatment. Brown, "Oral Diseases and Malformations," does not mention it. In the other works in which it is mentioned, the treatment is given principally along the old lines, such as tincture of iodin, silver nitrate, potassium permanganate, etc. Judging by the recent literature, the tendency at the present time is toward the use of local applications and salvarsan. I therefore think it may be acceptable to the profession to call their attention to a series of twenty-five cases treated by myself in the last two years, with the observation of, at least, that many more, which were treated by my colleagues, with a report on three of the cases showing special interest.

In my observation of these cases I have been particularly struck with the lack of ability on my part to differentiate the gross lesion from that of syphilis and diphtheria, and believe with the authorities who agree on the diagnosis being made by the finding of the spirochæte and the fusiform bacilli in smears taken from the lesion. In all of these cases reported these micro-organisms have been found present, with one or two exceptions."

He notes "that the disease is most often confined to softer and more easily invaded tissues, the tonsil being the seat of the majority of infections. Following this have been the hard palate and the gums, followed by the tongue, and in some cases an invasion of the bone, the bone infection usually coming in children. It takes on two distinct forms: one, where the tissues are necrotic with a slough and exudate; the other, where there is very slight exudate, and the process, if confined to the tonsil, being apparently a clean-cut surface, with progressive loss of substance. This form, I believe, to be responsible for most cases of necrosis of the tonsil that have been reported."

He further states that "the second form of this disease is sometimes found in the tonsillar crypts, in which we can see no loss of substance, and runs a chronic course. The most noticeable feature of all forms is the persistent aching pain complained of by the patient."

In discussing treatment he writes, "up to two years ago I had treated all cases of Vincent's angina with every conceivable substance mentioned in the textbooks, with uniformly slow recovery and relief from pain. Two years ago, Dr. Henri Letord, a dental surgeon, called my attention to sodium perborate ('New and Nonofficial Remedies,' 1912, page 226), with which he had recently treated a case of Vincent's

angina of the gums. I immediately began the use of this substance, with uniform success. A common mistake is considering perborate of soda to be the same as the common borax of commerce. The perborate splits up in the mouth, forming nascent peroxid of hydrogen. It is usually prescribed in a powder, two teaspoonfuls dissolved in a glass of water, this making a saturate solution, which is to be used frequently as a mouth wash and gargle. It is exceptional to find a case in which the pain is not relieved within twenty-four hours and a cure within a short time."

The author then reviews three cases as illustrations of the method and success of using this treatment. In one of these cases the bone of the superior maxilla was involved, thus showing that the soft parts are not alone invaded by this organism.

W. S. M.

EXTRAGENITAL CHANCRES

Caskill, H. K.: Extragenital Chancres. New York Medical Journal, Vol. CII, 1915, p. 839.

In this article Caskill gives some consideration to the general subject of extragenital chancres, he calls attention that it is manifestly impossible to determine with any degree of accuracy the comparative frequency of extragenital chancres. Further, the only place in which this could be even approximately estimated would be in the army or the navy, where careful statistics are made of all venereal diseases and the utmost care taken to prevent their contraction; even in the army and the navy the records are by no means complete, in spite of every care to make them so. For entirely different reasons, the statistics of hospitals are far from accurate, especially where the different specialties are conducted in various departments, each one having its own method of taking histories and examining patients. The author contends that unless there is a well maintained correlation between the several departments that treat syphilis, namely the genitourinary,

dermatological, and the gynecological—the value of these statistics is entirely lost. The case histories of eleven extragenital chancres are given with some detail and well illustrate the varied locations of chancres aside from the usual genital lesion. The article has five illustrations.

J. L. K-S.

NEW AND NONOFFICIAL REMEDIES.

During December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Heilkraft Medical Co.:

Dimazon, Dimazon Oil, Dimazon Ointment, Dimazon Powder.

Hoffmann-LaRoche Chemical Works:

Betain Hydrochloride, Roche.

Beta-Naphthol Benzoate, Roche.

Ergotinine Citrate, Roche.

Homatropine Hydrochloride, Roche.

Seiden Peptone, Roche.

Theobronine and Sodium Acetate, Roche.

Hynson, Westcott and Co.:

Mercury Biniodide Oil Solution in Ampules, H. W. and Co.

Knoll and Co.:

Ichthalbin Tablets, 5 grs.

Triferrin Tablets, 5 grs.

Merck and Co.:

Antithyroidin Moebius Tablets, ¾ gr.

Apiol, Merck.

Berberine Hydrochloride, Merck.

Creosote Carbonate, Merck.

Dionin Tablets, Hypodermic, 1 gr.

Dionin Tablets, 1/4 gr.

Ergotin, Merck.

Euguinine Tablets, 2 grs.

Euquinine Tablets, 5 grs.

Ferratin Tablets, 1/2 gr.

Iodipin Tablets, 3 min.

Iron Lactate, Merck.

Liquid Petrolatum, Merck.

Ouabain, Merck.

Phenolphthalein, Merck.

Phloridzin, Merck.

Quinine Tannate, Merck.

Sodium Phosphate, Monobasic, Merck. Sodium Nucleinate, Merck.

Stypticin Tablets, Hypodermic, 3/4 gr.

Stypticin Tablets, Dental, 3/4 gr.

Stypticin Tablets, Sugar-Coated, 3/4 gr.

Sulphanilic Acid, Merck.

Theophyllin Sodium Acetate Tablets, .15 gm.

Triphenin Tablets, 5 grs.

Tropacocaine Hydrochloride Tubes, Sterilized, 1 gr.

Veronal Sodium Tablets, 5 grs.

H. K. Mulford Co.:

Diphtheria Toxin for Immunity Test (Schick Test), Mulford.

Parke, Davis and Co.:

Iodalbin and Mercurol Tablets.

Mercurol Tablets, 1/4 gr.

Mercurol Tablets, 1/2 gr.

Mercurol Tablets, 1 gr.

Mercurol Tablets, 2 grs.

Mercurol with Potassium Iodide Tablets. Powers-Weightman-Rosengarten Co.:

Calcium Phenolsulphonate, P. W. R. Swan-Myers Co.:

Swan's Typhoid Bacillus Vaccine (No. 44; Hospital Package).

Swan's Typhoid Bacillus Vaccine (No. 44; Board of Health Package).

Lehn and Fink:

The Council has recognized Lehn and Fink as selling agent for Chloralamid, Schering.

EURESOL PRO CAPILLIS — Euresol (see New and Nonofficial Remedies, 1915, p. 268) perfumed to render it suitable for scalp lotions. Merck and Co., New York. (*Jour. A. M. A.*, Dec. 4, 1915, p. 2009.)

Pollen Extract (Pollen Vaccine).—A solution of pollen protein. It is used for the relief or prophylaxis of a common type of hay fever (pollinosis). Before using it the patient's susceptibility and tolerance should be determined. Treatment with pollen extract has seemed to give relief in some cases.

HAY FEVER VACCINE, MULFORD (AUTUMNAL).—Pollen extract prepared from ragweed. Marketed in packages of four

syringes containing, respectively, 0.0025 mg., 0.005 mg., 0.01 mg., and 0.02 mg., of pollen protein. Also in separate syringes containing 0.02 mg. pollen protein. The H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, Dec. 4, 1915, p. 2009.)

MERCURIC SUCCINIMIDE, MERCK.—A non-proprietary brand of mercuric succinimide admitted to New and Nonofficial Remedies. Merck and Co., New York. (Jour. A. M. A., Dec. 4, 1915, p. 2009.)

Morphine Meconate, Merck.—A non-proprietary brand of morphine meconate admitted to New and Nonofficial Remedies. Merck and Co., New York. (Jour. A. M. A., Dec. 4, 1915, p. 2009.)

Swan's Staphylococcus Bacterin (No. 37).—Marketed in packages of six 1 c.c. vials and in 20 c.c. vials. Swan-Myers Company, Indianapolis, Ind.

SWAN'S STREPTOCOCCUS BACTERIN (No. 43.)—Marketed in packages of six 1 c.c. vials and in 20 c.c. vials. Swan-Myers Company, Indianapolis, Ind.

CALCIUM PERONIDE, MERCK. — A non-proprietary brand of calcium peroxide admitted to New and Nonofficial Remedies. Merck and Company, New York.

Sodium Peroxide, Merck. — A non-proprietary brand of sodium peroxide admitted to New and Nonofficial Remedies. Merck and Company, New York.

ZINC PEROXIDE, MERCK.—A non-proprietary brand of zinc peroxide admitted to New and Nonofficial Remedies. Merck and Company, New York.

ETHYL SALICYLATE, MERCK.—A non-proprietary brand of ethyl salicylate admitted to New and Nonofficial Remedies. Merck and Company, New York.

OSMIC ACID, MERCK.—A non-proprietary brand of osmium tetroxide admitted to New and Nonofficial Remedies. Merck and Company, New York.

Sodium Oleate, Merck.—A non-proprietary brand of sodium oleate admitted to New and Nonofficial Remedies. Merck and Company, New York.

THIOSINAMINE, MERCK.—A non-proprietary brand of thiosinamine admitted to New and Nonofficial Remedies. Merck and Co., New York.

UREA, MERCK.—A non-proprietary brand of urea admitted to New and Nonofficial Remedies. Merck and Company, New York.

Ampules Sodium Cacodylate, Mulford, 73/4 Grains.—Each ampule contains sodium cacodylate 0.5 gm. H. K. Mulford Company, Philadelphia, Pa.

AMPULES SODIUM CACODYLATE, MULFORD, 15 GRAINS.—Each ampule contains sodium cacodylate 1 gm. H. K. Mulford Company, Philadelphia, Pa.

AMPULES SOLUTION PITUITARY ENTRACT, MULFORD, 0.5 c.c.—Each ampule contains solution pituitary extract 0.5 c.c. H. K. Mulford Company, Philadelphia, Pa. (*Jour. A. M. A.*, Dec. 11, 1915, p. 2085.)

SCARLATINA STREPTO-SEROBACTERIN, MULFORD (THERAPEUTIC; SENSITIZED SCARLATINAL STREPTOCOCCIC VACCINE.)—Marketed in packages of four syringes. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Dec. 18, 1915, p. 2167.)

QUININE DIHYDROCHLORIDE (QUININAE DIHYDROCHLORIDUM).-The dihydrochloride of the alkaloid quinine. Since quinine dihydrochloride is very soluble, its use has been proposed where concentrated solutions of quinine are wanted, as for subcutaneous injections and similar purposes.

AMPULES QUININE DIHYDROCHLORIDE, MULFORD, 0.24 GM.—Each ampule contains 0.24 gm. quinine dihydrochloride in 1 c.c. of sterile solution. H. K. Mulford Co., Philadelphia, Pa.

AMPULES QUININE DIHYDROCHLORIDE, MULFORD, 0.5 GM.—Each ampule contains 0.5 gm. quinine dihydrochloride in 1 c.c. of sterile solution. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, Dec. 18, 1915, p. 2167.)

Purified Tricresol, Mulford.—A mixture of isomeric cresols, corresponding closely to Cresol, U. S. P. H. K. Mulford

Co., Philadelphia, Pa. (*Jour. A. M. A.*, Dec. 18, 1915, p. 2167.)

IODOSTICKS (IODINE 60 PER CENT AND POTASSIUM IODIDE 40 PER CENT).—Wooden sticks 1½ inches long, tipped with a mixture of iodine 60 per cent and potassium iodide 40 per cent. Antiseptic Supply Co., New York. (Jour. A. M. A., Dec. 18, 1915, p. 2167.)

IODOAPPLICATORS AND IODOAPPLICATORS, SPECIAL IODINE 60 PER CENT AND POTASSIUM IODIDE 40 PER CENT).—Wooden sticks 6½ and 12 inches long, respectively, tipped with a mixture of iodine 60 per cent and potassium iodide 40 per cent. Antiseptic Supply Co., New York. (Jour. A. M. A., Dec. 18, 1915, p. 2167.)

G. STROPHANTHIN (THOMAS), MERCK.—A non-proprietary brand of ouabain, crystallized. Merck and Company, New York.

MERCURY BINIODIDE OIL SOLUTION IN AMPULES, H. W. AND CO.—One c.c. of solution contains red mercuric iodide in a neutral fatty oil, 0.1 gm. (1-6 grain). Hynson, Westcott and Co., Baltimore, Md.

MERCUROL TABLETS, ¼ GR.—Each tablet contains mercurol 0.016 gm. Parke, Davis and Co., Detroit, Mich.

MERCUROL TABLETS, ½ GR.—Each tablet contains mercurol 0.03 gm. Parke, Davis and Co., Detroit, Mich.

MERCUROL TABLETS, 1 Gr.—Each tablet contains mercurol 0.065 gm. Parke, Davis and Co., Detroit Mich.

MERCUROL TABLETS, 2 GRS.—Each tablet contains mercurol 0.13 gm. Parke, Davis and Co., Detroit, Mich.

MERCUROL WITH POTASSIUM IODIDE TABLETS.—Each tablet contains mercurol 1/4 gr. and potassium iodide 1 gr. Parke, Davis and Co., Detroit, Mich,

IODALBIN AND MERCUROL TABLETS.--Each tablet contains iodalbin 5 grs. and mercurol 1 gr. Parke, Davis and Co., Detroit, Mich.

LIQUID PETROLATUM, MERCK.—A non-proprietary brand of liquid petrolatum, U. S. P. It is made from American petroleum. It is colorless, non-fluorescent, practically odor-

less and tasteless. Merck and Co., New York. (*Jour. A. M. A.*, Dec. 25, 1915, p. 2239.)

MERCURIALIZED SERUM, MULFORD. — A solution of mercuric chloride in normal horse serum diluted with physiologic sodium chloride solution. It is proposed for the treatment of syphilis, particularly the cerebrospinal type. It is supplied as:

MERCURIALIZED SERUM, MULFORD, No. 1.—One 30 cc. ampule containing the equivalent of 1.3 mg. (1-50 gr.) of mercuric chloride with rubber tube and intraspinal needle.

MERCURIALIZED SERUM, MULFORD, No. 2.—One 30 cc. ampule containing the equivalent of 2.6 mg. (1-25 gr.) of mercuric chloride with rubber tube and intraspinal needle.

MERCURIALIZED SERUM, MULFORD, No. 3.—A package of ten 30 cc. ampules each containing the equivalent of 1.3 mg. (1-50 gr.) of mercuric chloride with rubber tube and intraspinal needle.

MERCURIALIZED SERUM, MULFORD, No. 4.—A package of ten 30 cc. ampules each representing 2.6 mg. (1-25 gr.) of mercuric chloride with rubber tube and intraspinal needle.

MERCURIALIZED SERUM, MULFORD, No. 5.—8 cc. mercurialized serum, Mulford, containing the equivalent of 22 mg. (1-3 gr.) of mercuric chloride in a syringe graduated in fourths, with needle.

MERCURIALIZED SERUM, MULFORD, No. 6.—A package of ten syringes, each containing 8 cc. liquid which represents 22 mg. (1-3 gr.) of mercuric chloride. H. K. Mulford Company, Philadelphia, Pa. (Jour. A. M. A., Oct. 2, 1915, p. 1185.)

BETANAPHTHYL SALICYLATE.—The salicylic acid ester of betanaphthol. It passes the stomach unchanged, but is split into its constituents in the intestinal tract. It is believed to act as an intestinal antiseptic and to act in a similar way in the bladder. It is said to be useful in intestinal fermen-

tation, catarrh of the bladder, rheumatism, etc. Mallinckrodt Chemical Works, St. Louis, Mo. (*Jour. A. M. A.*, Oct. 30, 1915, p. 1553.)

BETOL.—A name applied to Betanaphthyl salicylate (which see). Merck & Co., New York. (*Jour. A. M. A.*, Oct. 30, 1915, p. 1553.)

ZINC PEROXIDE, P. W. R.—A non-proprietary preparation of zinc peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Sodium Perborate, P. W. R.—A non-proprietary preparation of sodium perborate admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

FORMIC ACID, MERCK. — A non-proprietary preparation of formic acid admitted to New and Nonofficial Remedies. Merck and Co., New York,

AGAR-AGAR POWDER, MERCK.—A non-proprietary preparation of agar-agar admitted to New and Nonofficial Remedies. Merck and Co., New York.

AGAR-AGAR SHREDS, MERCK. — A non-proprietary preparation of agar-agar admitted to New and Nonofficial Remedies. Merck and Co., New York.

Berberine Hydrochloride, Merck.—A non-proprietary preparation of Berberine hydrochloride admitted to New and Non-official Remedies. Merck and Co., New York.

FLUORESCEIN, MERCK.--A non-proprietary preparation of fluorescein admitted to New and Nonofficial Remedies. Merck and Co., New York.

MERCURY CYANIDE, MERCK.—A non-proprietary preparation of mercury cyanide admitted to New and Nonofficial Remedies. Merck and Co., New York.

MERCURY AND POTASSIUM IODIDE, MERCK. A non-proprietary preparation of potassium mercuric-iodide admitted to New and Non-official Remedies. Merck and Co., New York.

Publisher's Notes

AGAR IN CHRONIC CONSTIPATION.

As is perhaps generally known to physicians, Agar (sometimes designated Agaragar), is a Japanese gelatin derived from seaweed. This substance has the natural property of absorbing water readily, and retaining it. It resists the action of intestinal bacteria, as well as that of the enzymes. Its use in the treatment of chronic constipation is based upon the fact that when ingested it passes practically unaltered into the intestine, where it adds to the bulk of the feces and thereby stimulates peristalsis; also it softens hard and dry fecal masses, thus favoring normal evacuation.

Parke, Davis & Co. supply a superior quality of Agar in granular form which is very convenient for use and free from the somewhat unpalatable character of the ordinary commercial product. It is marketed in pound and quarter-pound cartons.

One or two heaping tablespoonfuls, according to individual requirements, taken morning or evening, at meal-time, with milk or cream or mixed with a cereal food, usually produce the desired result.

POWERFUL ANTISEPTIC AND DIS-INFECTANT.

A solution of germicidal soap (McClintock), containing 1:5000 mercuric iodide, the active ingredient, destroys common pusproducing organisms in less than five minutes. Prof. F. G. Novy of the University of Michigan is authority for the statement.

He adds that solutions of mercuric chloride 1:1000 require more than fifteen minutes to accomplish the same result.

Germicidal soap (McClintock) is at once a sterilizer, cleanser and lubricant. It is useful for sterilizing hands, instruments, and sites of operation; for lubricating sounds, specula, etc. It is excellent for vaginal douching, as it tends to dissolve pus, blood and mucus, whereas most other germicides coagulate them. It serves well as a disinfectant wash after attendance upon cases of communicable disease; in certain surface lesions associated with fetid discharge; in skin affections of parasitic origin. It is efficacious as a deodorant in offensive hyperidrosis. In short, whenever and wherever a powerful disinfectant and detergent is required, this soap would seem to be indicated.

Germicidal soap (McClintock) is supplied in two strengths, containing, respectively, one per cent and two per cent of mercuric iodide. The stronger soap (two per cent) is marketed in large cakes only; the milder (one per cent) in large and small cakes, in collapsible tubes (a soft soap), and in cylindrical sticks (for surgical use). Parke, Davis & Co, are the manufacturers.

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ORIGINAL ARTICLES

THE SEX QUESTION IN PUBLIC HEALTH.*

ISADORE DYER, Ph. B., M. D.,
Editor N. O. Medical and Surgical Journal,
Editor American Journal of Tropical
Diseases and Preventive Medicine, etc.,
New Orleans, Louisiana.

Perhaps the title of this paper appears meretricious in that the usually accepted lines of public health are well defined. The progress of public health, however, along new avenues of practice in the past few years has opened up many opportunities of service and as time goes on these must increase.

The general scope of public health contemplates the preservation of the community in the full enjoyment of health and in aiming at this those who administer the rules and laws related to the public health have expanded their usefulness from a mere perfunctory exercise of office so as to include the care of all those things which purvey to the public welfare, which embrace foods and drugs, the regulation of environment and the proper safeguards against contagious diseases. The school and its purposes fall within the protection of the public health authority and even the home must obey certain laws of practice, so far as the school child is concerned.

In weighing responsibilities the health official must often take the burden and the blame for sins of omission and commission in the care of the well and of the sick.

The demented, the criminal, the beggar

and the victim of accident all fall, at times, within the province of the health office!

Where sanitary codes are provided for the maintenance of the power and dignity, as well as for the activities and efficiency, of the health office, such codes are quite broad in the scope of their intention and authority. At many points the mere function of the health office as an advisory agent ends and the power of authority and of action begins, so relating the health and police activities that in many places they are one.

In the development of community protection, the law has first contemplated the protection of the individual against violence, against crime of all degrees; then it conserves property interests, familial rights, dictating the manner in which the law shall be fulfilled. As an individual right, state medicine is organic and under its provision must provide all protection of the individual so far as his physical well-being is concerned.

The regulation of vice has usually fallen within the duties of the police, and, whereever laws have been promulgated, they have been framed either with the view of control or of punishment. At no time have such laws proved efficient, for the large reason that they have lacked the elemental idea of public health interest, while the moral side has now and then colored police practise.

The ground has always been a delicate one, because of its essential relation to the personal privilege and to the personal habits of individuals in the community, heretofore affecting the accepted delinquency of the male.

^{*}Read in the Section on Public Health, ninth annual meeting Southern Medical Association, Dallas, Texas, November 8-11, 1915. Southern Medical Journal, Vol. IX, No. 2.

Forensic medicine deals with the phases of the question which come within the law—up to a certain point. Rape and murder are prominent subjects of medico-jurist interest in connection with sex influences, but these represent only a part of the whole question.

Every now and then groups of men and women have met in conference to weigh the problems of hygiene as related to sex and have debated the ways and means of betterment. Here sociological phases come in and the public interest appears in the divisions of the subject which relate to prostitution, and to the diseases which are associated. From such gatherings have come a wider knowledge of the subjects discussed, with a more enlightened tendency in the enactment of laws regulating the control of the conditions affected. Even states and the national government have provided legislative acts to further the improvement in the moral side of these questions and, so far as the general welfare is concerned, good has resulted. Uniformity, however, has been lacking, with the result that the situation is one of present unrest rather than of any approach to a real solution.

The organization of permanent bodies for the purpose of studying questions of social hygiene has materially helped in the dissemination of interest and of knowledge, but every day the newspapers present a series of accounts of the continuance of vice in all its ramifications—from the cases of crime from mere lust to those of refined perversion.

We are quite far from an ideal status, then, and in the serious review of what has been done, there must be the reflection that perhaps the attack has been wrong. The quiet endeavor of local and national organizations with the altruistic purpose of reclamation and of control of those who have been caught in the web of vice is deserving but more or less barren of result in the face of the vast problem involved.

The moral effect is good, but the practical results are doubtful.

This brings us to the topic under discussion and to make it effective in presentation, the question may be propounded:

Is the sex question altogether one of law and morals?

We submit that for the purpose of results it is essentially a question of public health. The discussion and the argument must present many phases, for to bring the subject within the field of state medicine, ergo, within the scope of public health, we must assume from the start that the prime object in the consideration of the sex question as a matter of health is one which concerns the preservation of the individual as a community unit.

Where may we begin?

Sex hygiene is today a fetish, bandied about by the pedagog, the preacher, the politician and the physician, in the endeavor to escape the responsibility of indicating the application of the subject to a practical science in education. Congresses debate some phases of sex hygiene; both sides are vehement in urging and opposing the dissemination of knowledge among the young, and while they continue to disagree, the young go on learning in the old-fashioned way.

The present-day board of health bulletin teaches many valuable lessons to the young and to the old—about the fly, about the mosquito, about the germs of disease, about drinking water, about habits of function of the bowels, about the sanitary care of the house and the premises, not even hesitating to go into details when discussing the privy and its dangers. Why should the elemental ideas of sex be taboo?

Preventive medicine is the largest function of the health office today. The knowledge of dangerous diseases is one of the chief weapons against them. The additional knowledge of the means to prevent them would do away with many diseases in time.

Sex hygiene means more than the mere

to be merely fortuitous, and must be considered as strong evidence for the importance of childhood infection. The statement of Pollak that the earlier the infection the more serious the outcome also receives support from Wallgren's statistics, for of the fifty-one consumptives, fifteen had been exposed during the first five years of life, whereas, of the thirteen healthy persons who gave a history of exposure, in but one case had that exposure been before the sixth vears. While statistical studies of this sort are extremely difficult and time-consuming," says The Journal of the American Medical Association, "if conducted with enough care and controls to be worthy of consideration, their value in the vital problem of the control of tuberculosis is so great as to make them well worth the effort of those who have access to suitable material. and it is to be hoped that larger series of statistics on this topic will soon be forthcoming to settle definitely this fundamentally important question."

TYPHOID FOLLOWING TYPHOID VACCINATION.

"Considerable publicity has been given to the fact that several cases of typhoid fever occurred this fall among students at Delaware College, Newark, Del., shortly after they had received protective inoculation against typhoid fever. On inquiry of the president of Delaware College we are informed that in 1915, 106 men and 22 women were inoculated. Three of the young men subsequently developed typhoid fever, one after the first inoculation, one after the second, and one after the third. Illness in the first case occurred in 'less than ten days after the inoculation'; illness in the second case, 'in less than ten days after the second inoculation,' and in the other, 'almost immediately after the third inoculation.' It is stated that all these young men came from localities in which there is or has been typhoid fever. From the facts as indicated, it appears possible that the infection may have been received shortly before or during the inoculation period. Exact dates as to day of onset and days of inoculation are not given, the source of the vaccine is not stated, and apparently no detailed investigation of probable sources of infection has been made. It is plain that instances of this sort are employed to discredit the practice of typhoid vaccination, and it is much to be wished that all such occurrences should be investigated and a careful statement of facts placed on record. Newspaper reports of such happenings which reach us from time to time." says The Journal of the American Medical Association, "and the experience recently described by Sawyer, show the need for all the information we can obtain regarding the practical application and value of antityphoid inoculation."

Cancer Department

"In the carly treatment of cancer lies the hope of cure:".

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

A TRAGEDY IN TWO ACTS.

Time: The present.
Place: Everywhere.

Cast of Characters.

Mrs. A. (Any one of a vast number of women.)

Dr. B. (Who treats symptoms without trying to find out their cause.)

Dr. C. (A thorough man, who makes a complete examination of all his patients, and tries to arrive at an accurate diagnosis.)

Act I.
(Office of Dr. B.)

Mrs. A. (A robust, healthy looking woman): "Doctor, I want you to give me something to check an irregular flow which I have had for two or three months."

Dr. B. "All right, Mrs. A. How often does the bleeding occur?"

Mrs. A. "Every few days there is a slight spotting, but it is never severe."

Dr. B. "Have you had your change of life?"

Mrs. A. "Yes, I began having it about fifteen months ago, and after three months the periods stopped entirely. Then when this spotting began I thought it was still a part of the change, and thought nothing of it for a few weeks. I told Mrs. X., a friend of mine, about it, and she said it was perfectly natural, but it seems to be getting worse instead of better, so I thought I had better take something for it."

Dr. B. "Do you feel well in every other way?"

Mrs. A. "Yes, perfectly, except for constipation; I haven't a pain or an ache anywhere."

Dr. B. "Well, I'll just give you something to clean out your bowels for a day or two, then begin taking this prescription, a teaspoonful in water three times a day, and I think it will fix you up all right."

Mrs. A. "All right, Doctor; you don't think there is anything serious, do you?"

Dr. B. "No! No! You are just having your change of life; you will be all right pretty soon."

Mrs. A. "Good afternoon, Doctor, and thank you. I feel very much relieved to know there is nothing serious the matter."

Dr. B. "Good afternoon, Mrs. A."

Act II (One year later.)
(Office of Dr. C.)

Mrs. A. "Doctor C, I am Mrs. A. I have come to consult you concerning some female trouble I am having."

Dr. C. "Alright, Mrs. A." (He then proceeds to take a thorough family history, and a complete history of past illnesses.) "Now, Mrs. A., tell me when you first noticed any return of bleeding, after your change of life."

Mrs. A. "Fifteen months ago it first

began, but I thought nothing of it at first, because it was so slight."

Dr. C. "When did you first consult a physician about the condition?"

Mrs. A. "About three months after it began."

Dr. C. "What did he tell you was the matter?"

Mrs. A. "He told me it was the change of life, and gave me some medicine to check the bleeding."

Dr. C. "Did he examine you?"

Mrs. A. "No."

Dr. C. "Tell me as best you can what the symptoms were after this, up to the present time."

Mrs. A. "Well—I took the medicine that Dr. B. gave me until it gave out, but as it was not helping me any, I stopped it. The bleeding continued irregularly, getting gradually worse, but there was no pain at all with it, so I did not worry about it. Later I began having a thin brownish, watery discharge, which had a bad odor, and seemed to irritate the parts, causing a good deal of burning. I told the doctor of this, and he gave me some ointment to apply, which relieved the burning a good bit.

"Later my bladder began bothering me. It pained me to urinate, and I was forced to relieve my bladder at very frequent intervals. I then began losing weight and strength very rapidly, felt feverish at times, and all the former symptoms became worse. The discharge increased in amount, and became very foul odored; and I had two or three severe hemorrhages from the vagina.

"At about this time I began having a full feeling in the vagina and rectum, and had a good deal of trouble making my bowels move. This full feeling later became a constant pain, which went into my back, and down my thighs."

Dr. C. "How much weight have you lost since this trouble began?"

Mrs. A. "About fify or sixty pounds."

Dr. C. "Alright, Mrs. A. Go into the

next room, and Miss D. will prepare you for an examination."

(Two days later.)

Dr. C. "Miss D., take a letter to Dr. B., of ______."

"Dear Doctor B .:--

"I was consulted a couple of days ago, by Mrs. A., a former patient of yours, for examination and advice. I find that she has a very extensive carcinoma of the cervex, involving the upper one-third of the vagina, the base of the bladder, the anterior wall of the rectum, and both broad ligaments. I would judge from the history that it began about fifteen months ago.

"It is entirely inoperable at this time, and it is even questionable whether or not any palliative work would really palliate. I have placed the situation before her husband, and he is unwilling to have us try any palliative measures, so I am sending her back home to have her remaining months made as comfortable as possible.

"Yours very truly,

"DR. C----."

ARE YOU A DOCTOR B.?

REPORT REGULAR BOARD MEDI-CAL EXAMINERS.

Dr. E. W. Warren, Secretary of the Regular Board of Medical Examiners, gives the following report on the examination held in Jacksonville in December, 1915:

Twenty-six applicants were present, although thirty had registered. Twenty-one medical colleges were represented, as follows: Meharry Medical College, 4; Tulane University, 3; Saginaw Valley Medical College, 1; Kentucky School of Medicine, 1; Medical College of South Carolina, 1; Miami Medical College, 1; Atlanta Medical College, 1; Baltimore Medical College, 1; Bennett Medical College, 1; University of the South, 1; University of Louisville, 1; Rush Medical College, 1; Hospital Medical College of Evansville, 1; Birmingham Medical College, 1; Johns-Hopkins University, 1; Atlanta College of Physicians and Surgeons, 1; College of Physicians and Surgeons of Boston, 1; College of Physicians and Surgeons of Keokuk, 1; Bellevue Hospital Medical College, 1; Vanderbilt University, 1; University of Georgia, 1.

Of the 26 applicants present 10 passed, the other 16 having failed to make the general average of 75% required by the Board. Three were granted licenses, although they failed to make the required percentage, on credits allowed by the Board for long years of practice.

Including the spring examination, 63 new doctors have received licenses from the Regular Board of Examiners to practice in the State this year as against 110 during the year of 1914.

DO NOT PRINT YOUR LICENSE NUMBER.

While, so far as we know at the time of writing, no rule on the point has been made by the Internal Revenue people, it is announced as being undesirable that physicians print on their prescription blanks the number of the federal license issued under the Harrison law. Blanks with the number printed on, might easily be stolen and a name forged and the prescription taken to some drug store where the signature of the physician is unknown. In all probability. if many physicians do have their number printed on the blanks, a rule will be made to stop it, and so it is just as well not to do what we are advised would be objectionable. The law is a good law and it is working out well and smoothly; we should do everything in our power to help in the administration of a measure that will do more than we ever could to prevent the refilling of dangerous prescriptions and the unlawful sale of what we know better than any other class to be the most dangerous and destructive of drugs. It is not the letter nor the spirit of the law nor the purpose of its administration to hamper, in any way, any physician in the regular and legitimate practice of his profession; it is merely intended to stop the commercialization of drug vice.—California State Journal of Medicine.

Reviews from Current Literature

GUNSHOT WOUNDS OF THE ABDOMEN

Zimmerman, B. F.: Gunshot Wounds of the Abdomen. Am. Jour. of Surg., Vol. XXIX, 1915, p. 366.

Zimmerman reports six cases of gunshot wounds of the abdomen, five of which were operated within four hours, the other within ten hours after injury. All of the cases recovered. He believes that the good results obtained in this series are due largely to early exploration.

He quotes Rodman's statement that 15 per cent mortality follows operation in the first twelve hours, 44.6 per cent in the second twelve hours, 67 per cent in the third, and 70 per cent mortality in the fourth twelve hours. It seems probable that in all cases and in a larger series in civil practice, the 70 per cent mortality after thirty-six hours is greatly exceeded.

While it is true that military surgeons do not advise operations in abdominal wounds, it must be remembered that an operation in a field hospital, under stress and without adequate equipment, by overworked surgeons and nurses is usually more dangerous than the wound itself. The real reason that military surgeons oppose laparotomy in such cases is because the patients are received at the fully equipped base hospitals too late for safe operative interference. Military surgeons at army posts, or in semi-permanent hospitals, almost always operate if the men are received in the first twelve hours after injury.

Zimmerman recounts the facts that the symptoms of gunshot wounds of the abdomen are utterly unreliable as to the clinical determination of the extent of the damage. Shock may be present with or without perforation, or it may be entirely absent. Pain is inconstant, the pulse is variable, though as a rule a rapid thin pulse means hemorrhage. The safe procedure is immediate exploratory laparotomy, provided it is done by a competent man, and under favorable conditions of assistance and equip-

ment. If the conditions are all unfavorable, there is no doubt that the patients are safer under the military plan of treatment, namely, absolute quiet, morphine, ice-bags and no food. The mortality under this expectant treatment should not be more than 60 per cent.

R. C. T.

PAINFUL FEET

Frauenthal, Henry W.: Painful Feet. J. A. M. A., Vol. LXV, 1915, p. 1897.

The writer, in discussing painful feet. states that the infected or inflammatory types, practically all follow an infective focus in some other part of the body, such as the teeth, gums, mouth, throat, tonsils, nose, etc., or an infectious disease such as grippe, pneumonia, typhoid fever, etc. He also mentions the often overlooked painful foot in children which is a sequence of measles, tonsilitis, scarlet fever, etc. He emphasizes the necessity of search for the focal infection, and its eradication, after "fixation of the foot, and temporary support of the arch have relieved the local symptoms and been productive of partial cure."

"To treat this condition properly, a plaster cast supporting the arch and retaining the foot in a fixed position is the most perfect splint.

"The strapping of the foot after the method of Ochsner is also an efficient means of fixing the foot and sustaining the arch.

"The too long continued fixation by metal arch supporters results in atrophy of the interosseous muscles, fat, etc., owing to their non use. The hardness of the metal is objectionable, as it develops callus of the skin and periostitis of the bones.

When the inflamed foot is neglected or not properly treated, the inflamed agglutinated surfaces fuse together, and we have the fixed or static foot, in which there is no motion between the small bones. This type of foot is most unsatisfactory to treat."

He also calls attention to the infectious arthritides of the feet, due to a non-gonorrheal leucorrhea, to the numerous cases of gonorrheal foot infections, with their bone rarefactions and spur production, to tubercular and syphilitic conditions of the feet, and to true gout, all of which must be differentiated from the relaxed painful feet resulting from overtaxation or non use of muscles, as found in sedentary men and women, policemen, motormen, salesmen, etc.

In conclusion he states: "We can regard feet normal only when the foot moves through the normal plan of action in relation to the leg. To have feet perform their normal function, nothing is more important than proper shoes. In adapting treatment for painful feet, we must determine whether we are dealing with an infection of the foot or a relaxed condition of the supporting structures.

"If the pain comes on acutely, we have infection (except trauma); if the pain is developed gradually, we have relaxation of the supporting structures.

"The promiscuous application of foot plates has been condemned by many of the leading orthopedic surgeons. There is no doubt that there are many cases of painful feet due to strain that require some support under the arch. This can best be done by some yielding, springy substance, such as felt, much better than metal supports, and the sooner they can be removed, the better for the patient. The foot should have freedom of action in locomotion, not fixation."

R. C. T.

TUBERCULIN THERAPY

Shively, Henry L.: Tuberculin Therapy, Its Present Status. New York Medical Journal, Vol. CIII, 1916, p. 51.

Great expectations were aroused by the sensational announcements attending the discovery of tuberculin in 1890. Many therapeutic sins were committed in those early days by its use. Then there followed the inevitable disappointment, the storms of denunciation and abuse.

And yet, even during this period of ex-

travagant hopes and reckless administration, it was apparent to careful observers that in tuberculin we possessed a new agent of potential good as well as harm.

Old tuberculin, as it is now called, is a glycerine filtrate of the dead bodies of the tubercle bacilli. It has been variously modified, the most important perhaps of the latter products being bacillen emulsion, obtained by a long trituration of the living bacilli in normal salt solution. It is well for a beginner to select one preparation, preferably one representing all the substances contained in the bacilli, and the best for all purposes is probably bacillen emulsion. He should familiarize himself thoroughly with it, and have his work, for a time at least, based on one standard, uniform preparation, instead of aimlessly trying a variety of tuberculins of varying strength.

It should always be remembered that tuberculin in itself has no curative properties; it is in no respect like diphtheria antitoxin; it is an active immunizing agent dependent for its useful effects upon its power to stimulate the production of antibodies, which render its tissues unfavorable to the growth of tubercle bacilli or perhaps inhibit their pathological effects. It is evident, then, that for the production of good results, it is necessary that there should not be too great a depression of the normal physiological functions. Patients with severe mixed infections or with grave complications, such as diabetes or nephritis, cases of acute miliary tuberculosis and rapidly advancing cases of pulmonary tuberculosis with areas of softening and recent cavities, cannot be expected to react favorably to tuberculin. The special field, then, for tuberculin is that large group of patients with fairly good resistance, with little or no fever, stationary or slowly progressive. who are ineligible for, or cannot go to the sanatorium, or who have failed to attain a cure or arrest of their disease at the sanatorium.

It is impossible without trial to say what patients will respond well to the stimulus of the injections, just as it is equally impossible to say why tuberculosis in some cases runs a rapid and fatally progressive course. The mysterious factors of what, for want of a better term, we call the patient's resistance, are an important element, and it is certainly true that in many cases this can be developed and strengthened by immunizing doses of tuberculin.

Apart from the specific value of the tuberculin stimulus, there are certain incidental advantages in a continued course of tuberculin treatment which doubtless contribute in some measure to the results obtained. The tuberculin case is under better control, the patient feels that an effort is really being made to do something for him, and he is more willing to report regularly for observation and treatment.

The technic has, I believe, been invested with unnecessary difficulties. A blood count, the determination of the opsonic index or a complement fixation test is of little practical value in the treatment of the patient. The problems in tuberculin therapy are essentially clinical and not of the laboratory, and the physician's best guide is a carefully recorded observation of his patient's temperature, pulse, weight, and general condition.

T. T.

TONSILLECTOMY

Blum, Sanford: The Proper Position of Tonsillectomy in Pediatrics. Archives of Pediatrics, Vol. XXXII, 1915, p. 817.

The author compiles the results of one hundred cases treated in his private practice, gives what he regards as indications for tonsillectomy and makes marked objection to the frequent performance of this operation. It is a paper abounding in new and radical views and the author does not hesitate to criticise the "throat specialist" for undue ardor in tonsillar enucleation. He believes that simple hypertrophy of the tonsils is not the cause of disease but a result of increased functional activity. He believes

these organs have an important role to play in the conservation of health, and looks upon them as excretory organs for the cervical glands. That when bacteria are found in the tonsils they may be on their way out rather than entering the system. Tonsillectomy is an excellent surgical procedure in certain selected cases, but it is an operation much abused by excessive performance. It should rarely be performed before the eighth year. It should not be performed in infants, and in practically no case should it be done till conservative treatment has proved unavailing.

J. D. L.

BOILED MILK

Daniels, Amy L., and Stuessy, Sylvia: The Nutritive Value of Boiled Milk, Am. Journal Diseases of Children, Vol. 11, 1916, p. 45.

The conclusions reached in this paper are founded on experimental feeding to rats, of varying ages, of raw, pasteurized and boiled milk. The boiling of cow's milk renders it more easily digested but renders it more inadequate, as a nourishing agent, than raw milk. It matters but little the length of time milk is boiled, as concerns the impairment of the milk as a nourishing agent.

In the feeding of infants raw milk is to be preferred except in those cases where babies are unable to digest it and where there is danger that the milk may have been contaminated. In such instances the pediatrist is justified in using boiled milk. When boiled milk is employed as a food for infants the mixture should have a higher protein content than when raw milk is used.

J. D. L.

PYELITIS IN INFANCY

Bentley, James M.: Pyelitis in Infancy. The Lancet Clinic, Vol. CXV, 1916, p. 10.

This paper is a complete treatise on pyelites as it occurs in infants and young children. Pyelitis is a much more frequent disease than is generally believed, and is the cause of many cases of fever of unknown causation. More frequent examina-

tion of urine of infants is indicated to detect this rather prevalent malady. Particular attention is directed to shivering as a symptom of pyelitis, and the author believes that this disease is the commonest cause of chills and rigors in infancy. The etiology, pathology and treatment are carefully considered and are consistent with the most modern and accepted views on this subject.

J. D. L.

LUETIN REACTION

Hanes, Frederic M.: The Luetin Reaction in the Diagnosis of Tertiary and Latent Syphilis. The American Journal of Medical Science, Vol. CL, 1915, p. 703.

Hanes gives a very clear insight into the technique and value of the luetin test for syphilis, especially in regard to the diagnosis of latent and tertiary syphilis. The Wasserman test is not belittled, or its value underestimated by the author, in the face of a negative Wasserman reaction it is then that the luetin test becomes of value, as experience has shown that by no means do all syphilitic patients give a positive reaction and it is in this class of cases that the luetin test is of value. The author also calls attention to the fact that the luetin and Wasserman reactions do not depend upon the same biological condition of the body for their production. The exact mechanism of the Wasserman reaction is not known, but it is certainly dependent upon some definite alteration of the blood serum whereby a specific antigen is fixed in some way to a complement; the luetin reaction, on the contrary, is a test of specific cutaneous hypersensitiveness, analogous to the tuberculin test. In primary and secondary syphilis the author considers the Wasserman test superior, but in the later stages he compares luctin favorably with the Wasserman. Mention is made of the variation of the character of the reaction in different patients, but it is constant in its features in the same patient when performed at different times. The reactions usually developing in twenty-four to forty-eight hours. a case is cited in which the reaction did not appear until the twenty-first day after the injection. The article is illustrated with six photographic cuts showing the different stages of the positive reaction and from the study of the two hundred cases on which the report is based the following conclusions are given:

- "1. The luetin reaction when positive is absolutely specific. I have not seen a single positive reaction in a case free from symptoms and physical signs of syphilis.
- "2. The reaction is of limited value in other than tertiary cases.
- "3. The luctin reaction is a more delicate test for latent and tertiary syphilis than is the Wasserman reaction.
- "4. Patients suffering with visceral syphilis give positive luctin reactions with great constancy. This seems especially true of cardio-vascular syphilis.
- "5. The luctin test represents a distinct advance in the diagnosis of syphilis, and is a very helpful supplement to the Wasserman test in the diagnosis of tertiary syphilitic lesions."

 J. L. K-S.

NEW AND NONOFFICIAL REMEDIES.

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Dessicated Pineal Gland, Armour.— The pineal gland of normal cattle, freed from connective and other tissues, dried and powdered. There is some evidence that there is a relation between the pineal gland and some processes of development and growth. The therapeutic use of the gland is in the experimental stage. Pineal gland, Armour, is also supplied as Pineal Gland Tablets, Armour, 1-20 gr. Armour & Company, Chicago. (Jour. A. M. A., Sept. 25, 1915, p. 1111.)

Publisher's Notes

AGAR IN CHRONIC CONSTIPATION.

As is perhaps generally known to physicians, Agar (sometimes designated Agaragar), is a Japanese gelatin derived from seaweed. This substance has the natural property of absorbing water readily, and retaining it. It resists the action of intestinal bacteria, as well as that of the enzymes. Its use in the treatment of chronic constipation is based upon the fact that when ingested it passes practically unaltered into the intestine, where it adds to the bulk of the feces and thereby stimulates peristalsis; also it softens hard and dry fecal masses, thus favoring normal evacuation.

Parke, Davis & Co. supply a superior quality of Agar in granular form which is very convenient for use and free from the somewhat unpalatable character of the ordinary commercial product. It is marketed in pound and quarter-pound cartons.

One or two heaping tablespoonfuls, according to individual requirements, taken morning or evening, at meal-time, with milk or cream or mixed with a cereal food, usually produce the desired result.

POWERFUL ANTISEPTIC AND DIS-INFECTANT.

A solution of germicidal soap (McClintock), containing 1:5000 mercuric iodide, the active ingredient, destroys common pusproducing organisms in less than five minutes. Prof. F. G. Novy of the University of Michigan is authority for the statement.

He adds that solutions of mercuric chloride 1:1000 require more than fifteen minutes to accomplish the same result.

Germicidal soap (McClintock) is at once a sterilizer, cleanser and lubricant. It is useful for sterilizing hands, instruments, and sites of operation; for lubricating sounds, specula, etc. It is excellent for vaginal douching, as it tends to dissolve pus, blood and mucus, whereas most other germicides coagulate them. It serves well as a disinfectant wash after attendance upon cases of communicable disease; in certain surface lesions associated with fetid discharge; in skin affections of parasitic origin. It is efficacious as a deodorant in offensive hyperidrosis. In short, whenever and wherever a powerful disinfectant and detergent is required, this soap would seem to be indicated.

Germicidal soap (McClintock) is supplied in two strengths, containing, respectively, one per cent and two per cent of mercuric iodide. The stronger soap (two per cent) is marketed in large cakes only; the milder (one per cent) in large and small cakes, in collapsible tubes (a soft soap), and in cylindrical sticks (for surgical use). Parke, Davis & Co. are the manufacturers.

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ORIGINAL ARTICLES

ARTIFICIAL INFANT FEEDING BY
MALT-SOUP.*

A. Graeme Mitchell, M. D., Philadelphia, Pa.

In the feeding of babies who have been deprived of their proper and natural foodbreast milk—one frequently meets with a condition in which the child is unable to digest and thrive on cow's milk diluted or modified in the usual way. In this type of case we are forced to various expedients, among which malt-soup takes a not inconsiderable place. These difficult feeding cases while seen in private practice are especially frequent in hospitals which treat babies and children, and it was while working with Dr. J. P. Cozer Griffith at the Children's Hospital in Philadelphia that most of my knowledge of malt-soup was collected. The paper is published at his suggestion.

It must be remembered that there is nothing new about malt-soup, and while we look to Keller¹ as the elaborator who put this form of feeding on a sound scientific basis, the different ingredients of malt-soup had been used before as early as 1865 by Liebig, and even previously to this. Malt-soup has at times been a very popular part of the infant's dietary, and has been widely used in most European countries.

It may be asked if malt-soup is a rational food and is justified scientifically. In order to prove that this form of feeding is both rational and scientific I shall try to present sufficient evidence.

The facts brought out are in a large part gathered from a careful study of Keller's

*Read by invitation before the Volusia County Medical Society at Daytona, February, 1916. monograph, from later writings, and from our own observations.

Children who suffer from enteritis have an increase in the acid products of metabolism, and a lowered capacity of the body for the oxidization of acids. The alkali of the body combining with the increase of acid is excreted and lost from the body. Alkali must be added to the food to make up this loss and to neutralize the acid, and this is exactly what we do with malt-soup. We usually add this alkali as potassium carbonate because potassium is the form of salt found in the solid parts of the human body. Thus we have a good reason for the addition of potassium carbonate.

Why do we use malt-extract, in which the main ingredient is maltose, with a small amount of dextrin and other constituents? In the first place, the sugar is here in a further state of digestion than either canesugar or milk-sugar. Furthermore malt-sugar stimulates digestion more than do the other sugars, and is not as prone to fermentation as these. The most important reason lies in the fact that maltose does not increase the acid products of metabolism even when given in much larger amounts than other sugars. This explains why we use malt-extract.

Why do we use starch? We formerly believed that young babies could not digest starch, but we now know by observations of Hess² that even many new-born babies have amylase (the starch splitting ferment) in the pancreatic secretion.

By testing infants' stools we find that about seventy per cent of children can digest moderate quantities of starch³. We have confirmed this at the Children's Hospital. Starch does not readily undergo acid fer-

mentation⁴, protects the intestinal mucous membranes, and spreads the process of digestion over a longer length of intestine.

Malt-soup is a method of modifying cow's milk by the addition of malt-extract (with potassium carbonate), and starch in the form of flour. There are three kinds of malt-extract on the market which may be used. These have potassium carbonate added in proper percentage, and are called "Malt Soup Extracts." They are made by Loeflund, Borcherdt, and the Maltine Company. Almost any malt-extract may be used, provided it is non-diastatic, i. e., does not convert starch. This may be accomplished by heating it almost to boiling and keeping it there for several minutes. Potassium carbonate must also be added in the proportion of seven grains to the ounce of extract. Of course in the malt-soup extracts the starch-splitting ferment is already destroyed and the potassium carbonate has been added.

In the preparation of the soup itself, the amount of flour ordered should be mixed with a small amount of water to make a paste, the rest of the water ordered is added, the product is boiled for twenty minutes. Then the amount of malt-extract required is mixed with this starch-and-water solution, constantly stirring. The milk ordered should then be added and the whole brought to a boil again. Lastly sufficient additional water is supplied to bring up the amount lost in boiling.

In feeding it is well to have formulas of several different strength in order that one may start with a weak mixture and gradually increase. The formulas which are given below are figured out on the basis of twenty ounces. However, if one is using more for the twenty-four hours they may be readily increased by multiplication. For example, if one needs thirty ounces the amount of each ingredient to be employed in the twenty-ounce basis is multiplied by one and one-half, or if forty ounces is ordered, multiply by two.

You will , yee also that the formulas

show the percentages of fat, carbohydrates and protein. These have been carefully estimated for the malt-extract we used at the Children's Hospital. The percentages would be practically the same if any malt-extract were used, as most good extracts are very much the same.

As to the variety of flour, any good wheat-flour or barley-flour may be used.

Formula A:

1/2 ounce wheat flour. 10 ounces skimmed milk.

10 ounces water.

1 ounce malt extract. Fat, 0.2%; carbohydrates, 7.5% (of which 2% is starch); protein, 2.2%.

Formula B:

1/2 ounce wheat flour. 5 ounces skimmed milk.

5 ounces whole milk.

10 ounces water. 1 ounce malt extract.

Fat, 1%; carbohydrates, 7.5% (of which 2% is starch); protein, 2.2%.

Formula C:

1/2 ounce wheat flour.

10 ounces whole milk.

10 ounces water.

1 ounce malt extract. Fat, 0.2%; carbohydrates, 7.5% (of which 2%is starch); protein, 2.2%.

Formula D:

1 ounce wheat flour.

10 ounces whole milk.

10 ounces water.

11/2 ounces malt extract.

Fat, 0.2%; carbohydrates, 11% (of which 3.8% is starch); protein, 2.6%.

Formula E:

11/2 ounces wheat flour.

10 ounces whole milk.

10 ounces water.

11/4 ounces malt extract.

Fat, 0.2%; carbohydrates, 14% (of which 5.7% is starch; protein, 2.9%.

In these formulæ the amount of flour is by weight, and the amount of malt-extract

It is not always necessary to begin with the lower formulas, and indeed it is often better to start with formula C, D or E. They should be fed every three or four hours. The amount of each feeding varies according to age and weight. Preceding the employment of the soup, the child should be given a purge, and perhaps an irrigation of the intestines; and if in condition to tolerate it a short period of starvation—six to twelve hours—should be instituted.

In what kind of cases shall we use malt-soup? It is not a panacea and will not agree with every child. The typical case in which it is of greatest value is in the child who will not thrive on reasonable modification of the fat, sugar and protein of cow's milk. Some children will not gain on a weak mixture, and yet will vomit and have bad stools if the mixture is increased in strength. They are often the so-called "marasmus" or infantile atrophy cases. These babies will frequently digest the large amount of sugar in malt-soup, and can take more of the fat of cow's milk in malt-soup than in any other way.

A case which does well will show no vomiting: have from two to four rather large smooth stools a day; and should gain in weight steadily. If the baby shows vomiting which is not controlled by reducing the amount of food given, or diminishing the strength of the formula, has diarrhæa, and shows a starch reaction in the stool, he will probably not gain weight, and after a fair trial should be taken off this form of feeding.

What cases do not get well on malt-soup? Babies under four months; premature babies; vomiting cases; cases with much diarrhœa or considerable mucus in the stools, in our experience do not as a rule thrive. There are many exceptions even here, and malt-soup may work wonders in some of these cases.

In changing from malt-soup to ordinary milk-mixtures one must expect an initial loss of weight because of the removal of the large percentage of carbohydrates. The most satisfactory procedure is gradually to add a feeding or two daily of the milk-mixture having a somewhat lower percent of fat and protein than the malt-soup mixture, with a carbohydrate raised to seven per cent by the addition of dextri-maltose and a barley-water diluent. In this way the number of malt-soup feedings can be slowly reduced. There is no objection to keeping babies on malt-soup for several

weeks, and they may even thrive for months.

A word about the stools. Owing to the large amount of carbohydrates, the child getting malt-soup usually has several stools a day, although more than four should not occur if the patient is doing well. They are somewhat bulky and firm, and dark-brown in color. Mucus should not be present. The stools may at times, however, show a trace of mucus, and yet the patient do well. At least once every day a test for starch should be made. This is easily done by dropping weak solution of iodine on the stool, and observing whether a blue reaction occurs.

Examples of Favorable Cases

Case 1. Age 5½ months.

On admission had pneumonia. Had been breast-fed for two months, and since then on cow's milk mixtures. After convalescence from his pneumonia he was on milk mixtures (fat, 1.5 per cent; sugar, 6 per cent; protein, 1.5 per cent, and fat 2 per cent; sugar, 6 per cent; protein, 1.5 per cent) for eight days, during which time he lost twelve ounces; had daily one or two greenish yellow, loose, smooth, offensive stools with much mucus; no vomiting; took thirty-four to thirty-eight ounces a day.

On malt-soup eleven days; during which time he gained seventeen ounces: had daily two brown, loose, smooth stools, with very little mucus; no vomiting; took thirty-four to thirty-eight ounces a day.

Case 2. Age 10 months.

Admitted for intestinal indigestion. Had been breast-fed three weeks, condensed milk ten weeks; had milk mixtures fifteen weeks. Before malt-soup had casein-flour milk (fat, 0.3 per cent; sugar, 5.25 per cent; protein, 2.75 per cent) for one week; during which time the weight was stationary; had daily three to five greenish yellow, loose, smooth stools, with some mucus; no vomiting; took thirty-one to fifty-six ounces a day.

On malt-soup twenty-one days; during which time he gained thirty-three ounces;

had daily one to three brown, loose, smooth stools; no vomiting; took fifty-six ounce a day.

Case 3. Age 31/4 months.

Admitted for intestinal indigestion. Had been breast-fed for three months when the supply of milk ceased. Before malt-soup had casein-flour milk and a (fat, 2 per cent; sugar, 6 per cent; protein, 1.5 per cent) mixture for twenty-two days; during which time he lost sixteen ounces; had daily one to three yellow, soft, granular stools; no vomiting; took twenty to twenty-eight ounces a day.

On malt-soup sixteen days; during which time he gained thirty ounces; had daily three to four brownish yellow, loose, smooth stools; had occasional vomiting; took thirty-five ounces a day.

Case 4. Age 15 months.

Admitted for chronic intestinal indigestion. Had been breast-fed one month; milk-mixtures ten months. Before malt-soup had been on different milk-mixtures, and casein-flour milk for four months; during which time he gained sixteen ounces; had daily three to four yellow, loose, smooth to lumpy, offensive stools with some mucus; no voniting; took fifty-six ounces a day.

On malt-soup nineteen days; during which time he gained thirty-eight ounces; had daily three to four yellowish brown, loose to slightly lumpy stools, with at times mucus; no vomiting; took sixty-three ounces a day.

Case 5. Age 5 months.

Admitted for chronic gastro-intestinal indigestion. Had been breast-fed two months; milk-mixture one and a half months. Before malt-soup had casein-flour milk-mixtures, larosan for forty-eight days; during which time he lost three ounces; had daily three greenish yellow, loose, lumpy stools; no vomiting; took twenty-five to forty ounces a day.

On malt-soup twelve days; during which time he gained twenty ounces; had daily two to four yellow, loose, smooth stools; no vomiting; took forty-four ounces a day.

Examples of Unfavorable Cases

Case 1. Age two months.

Admitted for chronic enteritis and infantile atrophy. Had been on some kind of milk-mixture; no other feeding history obtainable. Before malt-soup had been given milk-mixtures, buttermilk and Buco for forty-nine days; during which time he gained twenty-three ounces; had daily three greenish yellow, loose, smooth to lumpy stools with considerable mucus; no vomiting; took sixteen to twenty-four ounces a day.

On malt-soup twenty-one days; during which time he gained only six ounces; had three to four yellowish brown, loose stools with considerable mucus, and later a starch reaction to iodine; no vomiting: took thirty ounces a day.

After malt-soup was given casein-flour milk, had better stools, and gained in weight.

This baby was unable to digest the starch. Apparently the sugar content was not too high as there was no vomiting. It might have been possible to decrease the quantity of starch somewhat, and thus have kept the patient on malt-soup.

Case 2. Age 11/4 months.

Admitted for regulation of feeding. Premature baby. Had been fed on peptonized milk-mixtures. Before malt-soup had been given milk-mixtures in addition to diluted breast-milk for fourteen days; during which time he gained three ounces; had daily five to seven brownish yellow, loose lumpy stools with much mucus; no vomiting; took twenty ounces a day.

On malt-soup twenty days; during which time he gained five ounces; had daily three to six greenish yellow to greenish brown. loose, smooth stools, with considerable mucus, and later a strong iodine reaction; had occasional vomiting; took twenty to twenty-five ounces a day.

After malt-soup was given breast-milk, but died in a week.

This child could not digest sufficient starch. At times also the malt-soup was not

retained. The stools were frequent and it is probable that the sugar content of the food was too high for this patient.

Case 3. Age 1½ months.

Admitted for infantile atrophy. A seven months premature baby. Had been entirely breast-fed two weeks. Before malt-soup had been given breast-milk in addition to milk-mixtures and casein-flour milk for twenty-eight days; during which time he lost three ounces; had daily one to four greenish yellow, smooth to lumpy stools; occasional vomiting; took twenty to twenty-five ounces daily.

On malt-soup three days; during which time he lost five ounces; had greenish lumpy stools with much mucus; vomited a great deal; took twenty ounces a day.

After malt-soup was stopped he was again given breast-milk, egg-whey and but-termilk. Died eight days later.

This patient could not retain malt-soup, probably breast because of its high suggeontent.

Case 4. Age 4 months.

Admitted for regulation of feeding. Had been breast-fed for four weeks, then on milk mixtures. Before malt-soup had been given (fat, 1 per cent; sugar, 6 per cent; protein, 1.5 per cent) mixture for five days; during which time he lost seven ounces; had daily two to three greenish yellow, loose, lumpy stools with much mucus; no vomiting; took twenty-eight ounces a day.

On malt-soup thirteen days; during which time he gained eight ounces; had daily two to five brownish, loose, smooth stools, which were much improved, but later showed a strong starch reaction; vomited; took twenty-eight to forty-two ounces a day.

Another child showing starch indigestion. I have tried here to show that malt-soup is a reasonable food and to point out that in our clinical experience it is often useful, and has apparently saved life after other forms of feeding failed. I have tried to show that it is not difficult to prepare; how it is to be used, and when to try it.

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1805 Pine Street.

IS PRESENT KNOWLEDGE SUFFI-CIENT TO CURE AND PREVENT TUBERCULOSIS?*

J. M. MASTERS, M. D., Port Orange, Fla.

This is a question to which the world is imploringly seeking an answer from the medical profession. What response can be given? Must it be one of disappointment or one of cheer thrilling the laity with confidence in the ability of the medical world to cope with and vanquish this dreaded destrover of human life? I fear that the profession is yet not fully aware of the joyful confident answer that all the facts warrant it in proclaiming to the people. What dread, what grief, want and suffering could be dissipated if only the united voice of the medical profession could be enlisted in a powerful and harmonious chorus that would carry the music of truth around the world? That sufficient is known both to cure and prevent the further spread of tuberculosis, I wish to state with all the emphasis that experience and demonstrated facts can add to the declaration. But very few cases of consumption need die. It is within the power of the profession and is its imperative duty to stop the ravages of this disease. What, then, is standing in the way of a more general application of the knowledge that would cure the sick and shield the well from this malady? I shall endeavor to present the difficulties that must be overcome as they have been brought to my attention through the work of a number of years. That so many continue to contract and die of tuberculosis, is partly the fault of physicians and

^{*}Read before the Volusia County Medical Society, at Daytona, February, 1916.

largely the fault of the people. Let us first, if we can, learn wherein the profession is failing to do all that is possible in combating this disease. I feel sure that most all incipient, or even early stage cases, can be cured: not more than two to five per cent need die. If this statement is accepted as within the bounds of truth, then we must all recognize the fact that much is being left undone that should be done to save the lives of these patients.

Primarily the responsibility of all medical matters for the welfare of the public rests with the medical profession. In this particular disease the general practitioner must come to realize the great responsibility resting upon him; all cases of tuberculosis are first in his hands and upon his judgment and advice depends the life of the patient. The fact that in its incipiency the disease is curable makes an early diagnosis of paramount importance. The well-known prevalence of the disease should stimulate every practitioner to familiarize himself with methods of diagnosis, and in cases of doubt seek the assistance of those able to help. The failure of early recognition of the disease being so common makes it the first fault of the profession that must be corrected.

Another mistake entertained by many doctors, as well as by the laity, is that some specific medicine must be discovered for the cure of consumption, and that until this is found there is little or no use to attempt more than alleviate the suffering of the patient. Not long since a physician stated to me that he had been experimenting on patients for a long time, and he had never been able to keep one alive more than a year. I wish to emphatically state that the treatment and cure of tuberculosis does not depend on remedies but on methods. The patient must be so situated that his vital powers can have a free hand in combating the infection. The conditions under which the disease developed must be removed, and in most cases this means that

the patient must be removed from the condi-To avoid detail the patient must be placed under absolute control and care so that all habits of living are corrected and made the best. Responsibility, worry, work, disturbances of every nature must be eliminated. This brings us to the question of where and how can conditions that will permit of treatment and cure be secured, as the administration of potent remedies, except under perfect conditions, is unjustifiable. Only in very exceptional instances can all requirements for successful conduct of cases be supplied at the patient's home; the necessary discipline and obedience of the patient cannot be enforced, and the careful medical attention and observation which is indispensable is often difficult or impossible to attain. Every physician is familiar with the insurmountable difficulties which are encountered in attempting to care for patients in their homes. The profession and the public are slowly learning that institutions where these cases can be congregated and placed under complete supervision must be provided.

Better training in diagnosis for the family physician, the encouragement of Sanatoria, both public and private, candid and positive advice to patients early in the disease are the principal points that demand the co-operation of the profession. There are not, perhaps, more than ten per cent of tubercular patients that can avail themselves of the advantages of private institutions; so it becomes the duty of the profession to educate the people of the necessity for public Sanatoria to care for this large class, and also assist such legislation as will enable counties, or an association of several counties, to make these provisions. Until these things are done the death rate from tuberculosis will remain about the same.

The medical profession must also urge upon the various states the enactment of more rigid laws for enforcing preventiv measures. The attitude of the public toward this disease is one of fear, and tubercular subjects are so shunned even by friends that most patients endeavor to conceal their trouble. To avoid exposure they refuse to observe any precautionary measures necessary to prevent the spread of the disease. The public must be taught that simple contact with tubercular people is not dangerous, but that association with those who refuse to observe rules for prevention to avoid publicity is the source of much infection.

What has been accomplished in the state of Victoria, Australia, where it is claimed no active case of tuberculosis now exists, should be an object lesson for every country. Under stringent laws firmly enforced the disease has been practically eliminated. One of the regulations is, "Any one reporting a case of tuberculosis is paid \$2.50." This has secured very thorough reporting of cases. As soon as a case is reported an investigator calls and the patient is immediately sent to a Sanitarium. The law makes a few exceptions. If the patient is able to, and can convince the authorities that he will carry out all rules for the protection of the people, he is allowed to remain at home. He is furnished a card on which are very plain rules both as to sanitation and management of treatment. The inspector often visits these cases, and any violation of any rule sends the patient at once without formality to the Sanitarium. So that almost every case is treated in an institution, and having been sent there in the beginning almost every case recovers. In the United States tuberculosis Sanatoria are looked upon by the majority of the people as a pest house and a place where people in the last stages of consumption go to die. The public fails to understand the real character of a properly conducted Sanatorium. Many think of these institutions as places of gloom, distress, loneliness, homesickness, or isolation where misery and infection permeate the very air. This fear of Sanatoria is yearly causing the loss of thousands of lives that the Sanatoria could have saved. A rather illustrious example of this is that of the noted writer, Robert Louis Stevenson. No argument could ever overcome his prejudice to a Sanatorium; friends that had recovered in institutions could not prevail on him to go. He seemed to abhor the very name, and like many others are doing, he went from place to place thinking change of climate alone would cure him, and at last died on the island of Samoa, where he was buried. These examples are almost innumerable and illustrate one of the great faults of the public that must be corrected. Another obstacle in the way of prevention is our public schools. Fifteen years ago I advocated the plan that would require every child to be carefully examined before entering school. In a few cities this has since been inaugurated. It should be universally adopted. Not only would the danger of spreading the disease in the school be avoided, but those found with the trouble could be early placed under control and cured.

Another far-reaching evil is the sick tourist. After he has perhaps stubbornly refused the advice of his physician, and has become so advanced with the disease that death is knocking at the door, he begins to travel, going from place to place, making every possible effort to hide his true condition, studiously avoiding all precautions, stopping in every hotel and boarding house that will accept him, and most of them do, and so becomes the most prolific distributor of tubercle bacilli. The traveling consumptive should in some way be controlled. This is a question which our beautiful state may be called on to deal with. Other sections and some cities are confronted with the same problem. We already know sufficient to check the spreading of the disease; we know enough to cure it; as a profession let us work together to this end. There could be no greater satisfaction to any physician than to know he has had some part in conquering one of man's greatest foes.

THE EARLY DIAGNOSIS OF TUBER-CULOSIS.**

GUSTAV BAERECKE, M. D., DeLand, Fla.

In recent meetings of this society, Dr. Masters has brought to our notice with extreme care and accuracy the early symptoms even before the signs of tuberculosis, especially where only the quality and tone of the vocalized effort for removing mucus from the throat was the first indication. Dr. Ingram today has limited his remarks to the special organs that come under his domain, giving us a clear exposition of the tubercular processes. I will endeavor to reeall to our minds from a few selected cases of personal observation, some other signs and symptoms that led to the recognition of tubercular infection in other parts of the body, some to timely recognition—and some too late. Not to be didactic, I will give these eases in short histories, leaving them to your consideration and criticism.

Case 1. A young woman, married, 26 years, with negative family and personal history, presented herself in a run-down condition, tired, listless and apt to tears. She had had a child which she lost at the age of ten months, a year before. The baby was robust until a few days before death.

I went carefully into her daily habitsthey were good, slept outdoors, no cough, no pains except oecasionally in the right iliac fossa, menses were becoming irregular, somewhat scanty. I gave her a thermometer to keep a record. I examined the reflexes, pupillary, knees, ankle clonus, Babinski, none exaggerated or defective. The abdomen was smooth, a bit tender on deep pressure in the right fossa and I imagined I could feel a slight mass. Vaginal examination showed the generative organs normal, good position, but again upon deep pressure in the right fossa I struck a slight rounded mass, or thought I did, and it was tender. I went into the history of the baby's death, supposedly a volvulus or some abdominal condition, but learned of distinct signs of meningitis—possibly tubercular. Urine negative. A sub-cutaneous tuberculin test was given. She reported a rise to 101.3, and had a positive reaction on the arm. I treated her with von Ruck's vaccine. She ran a temperature for a month, then convalescence was uninterrupted, the tender areas disappeared, she gained in health, became stronger, overcame the great depression and nervousness, and is now the proud mother of another fine child. Diagnosis, tubercular adenitis-iliae fossa-secondary most probably to some unfound primary infection.

Case 2. A young man, very studious, a bookworm, contracted a case of gonorrhea. This was treated, cleared up and he passed elear urine. One day he had a slight hematuria. He again injected silver iodide, in quinee seed emulsion as for his gonorrhea. However, in spite of treatment, mieturition became more frequent, slight pains "somewhere up inside" not in the urethra and again the urine became bloody and increasingly so. I found no gonococci but staining for tuberele bacilli found them. I then did a cystoseopic, believing I would find a tubercular ureter with its characteristic dribble of pus and ulceration around the mouth. Instead I found a papillomatous growth on one side of the trigone, ulcerated around the edge. He rapidly declined in health, and before death the papilloma almost blocked the urethra. Microscopic examination showed tubercular uleers of infiltration.

Case 3. A little boy five years old lost his interest in play and seemed easily tired. He would lie down with the right leg flexed. Fever developed with slight tenderness in the right iliac fossa and pain at the navel. Diagnosis of appendicitis made in one of our large cities, and operation performed—a normal appendix removed. During convalescence and the rest in bed he had no fever, but pain persisted, and upon his exercising, the fever returned. Examined by several physicians who diagnosed several

^{*}Read before the Volusia County Medical Society at New Smyrna, April, 1915.

diseases, including pulmonary tuberculosis. An osteopath diagnosed tuberculosis of the spine from the navel pain. X-ray found lung clear but slight destruction of intervertebral cartilage in thorax. Child put in plaster jacket and given von Ruck's vaccine, when he came under my care. The fever left, he gained rapidly in weight and spirits. Last summer he walked all day in jacket and brace including head and neck brace, and slept at night on a frame. Last X-ray showed good healing.

Case 4. A little girl of seven years, syphilitic history in father who was treated and pronounced cured, developed tendency to lag in her play, to lie down, especially on one side, irritable, fitful in her desires, headache, loss of appetite. Finally she became feverish, staved in bed, moaning nearly continuously, and had pain in back of head, anorexia and started to vomit. The child had been treated slightly for malaria and biliousness. I suspected meningitis and noticed rigidity, Kernig's sign, tender, scaphoid abdomen, persistent vomiting and disturbance of pupillary reflexes. I learned at that time of the syphilitic history, but her teeth were good, and the mother had had no miscarriages. Blood count gave low leucocvte, which contraindicated specific meningitis but was suggestive of tuberculosis. The chest seemed negative. Spinal puncture demonstrated tubercle bacilli. Death in twenty days from first symptoms, tubercular meningitis.

Case 5. A woman, well nourished, negative family and personal history, mother of three healthy children, comes with ulceration of one nipple, strikingly like Paget's carcinoma. She had noticed some lumps around the nipple for several months, and the skin was adherent. She steadily gained in weight, no axillary involvement. Microscopic examination of a frozen section while hesitating about a radical operation proved the slight mass to be tubercular. The surgeon was hard to convince but no recurrence in three years.

Case 6. A rather well developed married woman, a physician's wife, complained of frequent urination with sediment of pus. Suspecting a latent gonorrhea, I examined smears and stained the sediment but found none. There was some slight unilateral pain in the hypochondriac region at times and kidney was barely palpable. She had been advised to have fixation of a floating kidney. Further examination did not show acidfast bacilli though there were bacilli that stained red and retained the stain temporarily. This was a catheterized specimen so could hardly be smegma bacilli. Not satisfied a few drops of urine were injected intraperitoneally in a guinea pig. In ten days the pig was killed and found tuberculous at site of injection—liver, spleen, lungs, etc. Tuberculosis of kidney-possibly bovine?

Case 7. This is the last case and possibly the most interesting. An athletic young married man came with a swollen, tender, soft testicle and history of slipping on the bar of his bicycle a few days before, injuring his testicle. I advised hot applications, later absorbent ointments. The testicle became fairly normal. In four months a recurrence of swelling and pain easily reduced but testicle a bit larger; in six months after injury I opened a large hydrocele, found the testicle very large, hard and nodular. I examined the fluid for tubercle bacilli but found none. I then began to question his truthfulness of a pure life and as the testicle grew larger told him it must come out, stating it was probably tuberculosis, possibly a gumma or might be sarcoma, though the cord was thickened but no glands involved. Upon removal high up, the glands were examined carefully, no enlargement found. We felt confident that the growth was benign but stained sections showed small round cell sarcoma. In two years no recurrence—though one may expect that almost as a certainty in the glands or liver.

Through these few cases, which to me

were very interesting because of the confusing symptoms or lack of symptoms and yet marked involvement, I have no doubt recalled to all here similar or even more complex forms of tuberculosis and only added a few more items to that long list of warnings that the Great White Plague strikes all classes and types of men in any form simulating many other diseases and giving but slight notice of its ravages.

CERVICAL LACERATION.*

Davis Forster, M. D., Hawks Park, Fla.

A recent discussion of a paper led to the expression of opinions that were different as to effects and results of cervical lacerations, and of the advisability of repairing the same. Therefore, a review of the facts will not be out of place at this time, though the subject is an old one, and yet it might be well for us to go over well-trodden ground again, lest we forget.

The first operation of hystero-trachelorrhaphy was performed by Thomas Addis Emmett of New York and was named by Dudley of Chicago. Emmett's operation followed upon the era of womb splitting inaugurated by his predecessors. The investigations of Emmett were of great value to the profession, as he first demonstrated by catching the denuded cervical lips with a hook and bringing them together, that there was a laceration present and not an erosion. Previous to that event the everted surfaces of the cervix had been treated as a pathological entity, cicatricial ectropion. Emmett's operation demonstrated itself of somarked benefit to the patient that it became a fad, and like all fads, was probably overworked. The operation, however, was founded on firm surgical grounds and the technique of Emmett was so perfected that we use the same with but little alteration to this day.

Cervical laceration is caused nearly al-

ways by the passage of the fœtus through the cervical canal, sometimes by the rapid dilation due to curettage. The laceration may be unilateral, bilateral or stellate, is more often on the left side, because the occiput impinges on that side more frequently, causing greater distention. We cannot wonder at the frequency with which a tear takes place when we remember that that canal normally one-eighth of an inch in diameter has to dilate to allow the passage of a body with a diameter of more than four inches.

The uterus is a muscular body with longitudinal and circular fibers. It weighs after being emptied at term about two pounds. When the cervix is torn the point of insertion of the longitudinal muscle fibers is interrupted and their contractability is interfered with. The uterus is unable to involute to its normal size. The organ becomes flabby, loose, boggy, and infiltrated with serum. The mucus membrane is congested and menstrual flow exaggerated and deranged. Through loss of tone the uterus bends at the junction of the cervix and body. The cervix, with lips everted by muscular contraction, is forced down on the floor of the vagina by the overweight of the organ and by pressure the lips are further separated. Lined with columnar, ciliated epithelium, with glands secreting an alkaline mucus, it is forced to remain in the acid secretions of the vagina constantly irritated by them. The glands of Naboth become closed and form cysts which in time riddle the cervix with a cystic degeneration.

The interus swinging normally in its peritoneal hammock, becomes overweighted and drops backward and further pressed by intra-abdominal force, swings in the arc until the fundus passes the promontory of the sacrum.

Again, the lacerated cervix serves as an open door through which infection may creep in by the continuity of mucosa through nature's mechanical gateway, the external os, or through the lymphatics with

^{*}Read before the Volusia County Medical Society at Port Orange, April, 1915.

which the uterus is so rich. Invasion by continuity of mucosa is, broadly speaking, by the gonococcus of Neisser, with subsequent involvement of the endometrium, the Fallopian tubes and the peritoneum, while invasion through the lymphatics is more often of septic origin, the staphylococcus and streptococcus pyogenes. This invasion of foreign media of irritation takes place whether the tear be sufficient to involve the cellular tissue surrounding the uterus. or if it be confined within the area of the canal itself. Granted the bacterial invasion of the organ, followed by nature's effort to limit the area of infection by hurrying to the parts a leucocyte army to build a plastic wall, we have the cardinal symptoms of pain, heat, redness, swelling and increased secretion, in short, inflammation, and the retroverted uterus is bound by plasma exudations in its unnatural position, where it lies with twisted vessels adding to its congestion.

This infection with its consequent inflammation may not take place for a variable time following the laceration and subinvolution and is in no sense to be considered as a cause of the subinvolution. This subinvolution extends not only to the uterus but to the round ligaments, the tubes and surrounding tissues.

As regards prophylaxis we should abstain from applying forceps until the cervix is fully dilated, should not give ergot until the uterus is empty, should refrain from puncturing the anniotic sac, or from making pressure upon the abdomen when the child is in the uterus.

Sometimes when the surfaces are approximated and kept clean, these cervical tears will heal by primary union, if not subjected to muscular contraction; tears on the anterior and the posterior portion of the uterus are not subjected to muscular contraction and nature attends to these so well that the gynecologist finds the chief place for his work on the lateral parts of the uterus, which are separated by muscular contrac-

tion. If unable to heal primarily nature attempts a secondary repair by granulation, but where the squamous epithelium of the vaginal portion meets the columnar epithelium of the canal, a cicatricial plug is formed which prevents further return to the normal. This scar plug by pressure on nerve endings is responsible for a variable number of symptoms, which are relieved by the removal of scar tissue. Among these may be numbered persistent headache and backache and intractable vomiting.

In repair of the cervix the patient is put to bed the day before the operation, given a saline laxative the night before, an enema the morning of the operation and a bichloride douche of 1-2000. The vulva is shaved and covered with an antiseptic wet pack. The patient is brought to the operating room where under general anesthesia the vagina and cervix are washed with green soap and bichloride solution of 1-2000. The patient is placed in the lithotomy position with the perineum retracted with a Jackson or Edebohl speculum. Each lip or cervix is caught with a tenaculum forcep which gives control of the uterus. The area to be denuded is outlined with scalpel and tissue removed with scissors. Care must be taken to remove all scar tissue, for scar tissue in the would would prevent some of the good results looked for from the operation. A suture of No. 2 ten-day chromicized catgut is passed from vaginal surface of lip to the cervical canal and back through the other lip. About three sutures on each side are used to approximate as needed. Having not denuded the channel of the canal, we see that it is able to admit a sound but do not pack it with gauze. Keep the vagina sterile and use a douche if discharge shows at vulva. Let the patient up on the tenth day.

The results are more satisfactory in proportion to the severity of this operation than any which the gynecologist is called upon to perform. Following the operation the first menstruation will nearly approach a

hemorrhage, demonstrating the returning contractibility of the uterus, its reduction in size and its return to normal condition.

The Shelter Sanitorium.

COLLES FRACTURE.*

John Reeves, M. D., DeLand, Fla.

Under this term are included fractures of the radius near the wrist which, while differing from each other in many respects, have, in common, a characteristic deformity, and often a certain difficulty in making reduction.

Next after the ribs, this fracture is most frequently seen; as far as my own experience goes, it is, by far, the most frequent of all fractures, and in connection with it is the remarkable fact that until about a hundred years ago it was always considered and treated as a dislocation (backward) of the wrist, which it much resembles.

Ponteau is the first author to describe it as a fracture: his view of the injury did not appear to commend itself to his successors at once, as for thirty years after the publication of his views only an occasional mention is made of even the possibility of such a lesion, and the common injury was still called a dislocation.

Mr. Colles published his brief but accurate account of the fracture in 1814. A short period of doubt followed, and then about 1830, the fact was universally accepted, and the second stage, that of the discussion of details, which has lasted almost to the present time, was entered upon.

Before proceeding to describe this fracture, it will be necessary to say a few words in regard to the normal anatomy of the wrist joint and in order to be brief only the points actually concerned in this fracture will be noticed.

The bones which enter into the construction of the wrist joint are the radius, the lower expanded portion of it, the scaphoid, and semilunar; the ulna, while not strictly one of the bones at the joint, is right there. however, as we often notice to our sorrow.

The ligaments are the anterior and posterior radio-ulnar, anterior and posterior ligament, annular, external lateral, and internal lateral. The wrist joint is also covered, in front, by the flexor, and behind by the extensor tendons of the hand,

The muscles and tendons are the supinator longus, which arises from the condyloid ridge of the humerus, and is inserted into the base of the styloid process of the radius, the pronator quadratus which arises from the lower fourth of the anterior surface of the ulna, and is inserted into the lower fourth of the anterior surface and external border of the shaft of the radius; besides these are the flexors, and extensors of the thumb, and carpus.

The etiology, or cause, of this fracture, we are told by most textbooks, is a fall on the hyperextended hand, the weight of the body being received upon the carpus and thus transmitted to the radius. But it is more than that; it is the weight of the body plus the velocity at which the body was going. One may drop the weight of a hammer on the head of a nail, but without adding the velocity you get no result.

The fracture usually occurs from one-half to once inch above the articular surface of the radius and is transverse or oblique, according to the amount and direction of the force. In young subjects the solution of continuity may occur at the junction of the epiphysis with the rest of the bone.

At this point I want to impress upon you the fact, which is now undoubted, that while Colles fracture is a fracture of the lower end of the radius, and is always so defined, it is certainly something more than that—for whoever saw this fracture without there being something wrong with the ulna? I never did; it is either broken above the styloid, or the styloid is detached from the rest of the bone, or it is dislocated and forced (by the action of the pronator quadratus,

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and the force of the fall) downward and inward toward the palmar aspect of the wrist. We may be certain that in nine cases out of ten we have the ulna to deal with as well as the radius, and it is a very important point to know just where "it's at."

The symptoms of this fracture are marked and characteristic, but crepitus and abnormal mobility are not so well marked as in many other fractures.

The displacement is very considerable and bears some resemblance to dislocation of the carpus backwards, from which it should be carefully distinguished.

The lower fragment is drawn upwards and backwards behind the upper fragment by the combined actions of the supinator longus and the flexors and extensors of the thumb and carpus, producing a well marked prominence on the back of the wrist, with a sharp depression above it; also the radial side of the forearm is shortened, which shortening is plainly caused by the action of the supinator longus, which is inserted into the base of the styloid process of the radius. This is shown by the fact that the radial styloid, which is normally one-quarter of an inch lower (nearer the hand) than the ulnar styloid, is in this fracture drawn up even with, sometimes higher than, the ulnar styloid. This fact would be a good diagnostic point if the ulnar styloid were a fixed point, which it is not.

The lower end of the upper fragment projects forward and downward, causing a projection on the anterior surface of the forearm immediately above the carpus. This projection is not only the lower end of the upper fragment, but is also in part the flexor tendons which are thrust forward by it.

The injury to the ligaments already mentioned is never exactly the same in amount in any two fractures, depending entirely upon the position of the hand at the time plus the force of the fall.

It is safe to say that they are never all ruptured. The radio-ulnar ligaments, anterior and posterior often suffer most from the fact that the ulna is apt to go on after the rest of the hand stops. As I have said before, you never know just exactly what the ulna is going to do.

The most prominent diagnostic features are: First, the prominence of the lower fragment on the dorsum of the wrist with the crease or depression above it. Second the prominence of the lower end of the upper fragment on the palmar surface. Third, the fact that the styloid of the radius is up to or above the level of the styloid of the ulna (always supposing the ulna to be a fixed point) is also diagnostic but can be seldom utilized. Fourth, the hand being drawn to the radial side, and the radial side of the arm being shorter than in normal condition.

The general appearance and position of the hand and wrist is also a strong diagnostic point, and is aptly compared by Velpcan to the outline of the silver fork; of course, if there is no displacement, you do not get this perfectly.

The only other lesion of the wrist joint at all resembling this is (as I have before remarked) "dislocation of the carpus backward." The most important diagnostic marks are found in the abruptness of the angles formed by the projecting bones, the relation of these prominences to the styloid apophyses in the total absence of crepitus, and in the reduction, which is accomplished easily, suddenly with a characteristic sensation.

In this kind of practice the use of the X-rays is becoming almost universal and is of the greatest value, but is not always available.

Treatment.

Positive and complete reduction of the displacement is the "sine qua non," and the difficulty in its accomplishment varies greatly. Looking back at the cases of this kind which I have been unfortunate enough to have to treat, I must say without hesitation that although this lesion is called and is a fracture of the radius, I have had almost

invariably more trouble with the ulna than the radius, and I have no hesitation in saying that when I get that little bone safely back into the sigmoid cavity on the side of the radius where it belongs, I consider the rest easy.

Practically what have we here? A lower short fragment tilted upward and backward and generally impacted in the cancellated structure of the upper fragment.

An upper fragment displaced downward and forward, among the flexor tendons of the hand, and an ulna either dislocated or fractured, almost anywhere; also a mass of ruptured ligaments and muscles, as well as injured flexor and extensor tendons.

The indications for reduction are plainly: 1st. Anesthesia. 2nd. Straight extension and counter extension, if you have plenty of assistants—one at the elbow, the other taking the hand. 3rd. The operator himself manipulates the parts as follows: Both thumbs on dorsal aspect of lower fragment using steady and strong pressure downward and inwards toward the palmar surface, at the same time the fingers of both hands press the lower end of the upper fragment upwards toward the dorsal aspect of wrist.

The extension relieves the impaction—the pressure of the thumbs—on the dorsum, and the pressure of the finger ends on the palmar surface of upper fragment is usually all that is necessary. The operator is usually conscious of the crunching sound which indicates that the two surfaces are together again; he is quite assured of this if at the same time the deformity at the seat of injury disappears.

If, however, these procedures do not give a satisfactory result, the hand may be flexed to its fullest extent; extension being next up at the same time, we thus get the aid of the powerful extensor tendons which pass directly over the point of the lower fragment we are trying to depress, but this proceeding is seldom necessary. Just the reverse of this manœuvre hyperextension is advised in some textbooks, but I could never see why.

As to retentive apparatus, if the fracture is positively and perfectly reduced, splints are of very secondary importance; beyond doubt splints have done greatly more harm in this fracture than good, and are doubtless responsible for many an ankylosed joint and useless hand. But it is customary to use some form of retentive splint, usually one on the dorsum of the arm as far down as the phalanges, leaving the fingers free, and one on the palmar aspect down far enough to control the joint; these very light and retained with adhesive plaster, massage almost from the first, with passive motion, as soon as is safe—a straight wooden splint answering all indications. The pistol-shaped splint drawing the hand to ulnar side is not at all necessary. The supinator longus draws the hand somewhat to the radial side, but when the fracture is reduced is one of the means of keeping it so.

History tells us that from the days of Adam and Eve up to about a hundred years ago, this fracture was considered a dislocation and so treated (as I have before mentioned). It was no doubt reduced by manipulation and traction, but do we suppose there was any after treatment whatever? I think not, it would certainly be interesting if we had statistics to compare results then with those of the present day.

TYPHOID FEVER.*

H. L. MERRYDAY, M. D., Daytona, Fla.

Typhoid fever is classed as one of the acute infectious diseases being caused by the specific bacillus of Eberth and characterized, pathologically, by hyperplasia and sloughing of Peyer's patches and the solitary follicles of the intestines, with parenchymatous changes in the principal viscera; clinically by its gradual onset, peculiar temperature curve, swelling of the spleen, rose-colored spots, diarrhæa, tympanites and sero-reaction.

^{*}Read before the Volusia County Medical Society at Daytona, December, 1915.

It was only at a comparatively recent date that typhoid fever was clearly distinguished from typhus fever and this was appreciated at an earlier day in America than in either England or France, being due to the close clinical observations of our American authors.

Typhoid fever is the prevalent febrile infection of the present historical epoch, just as typhus was that of the three hundred years preceding the beginning of the nineteenth century, and the plague that of the middle ages. We might say it owes its present wide distribution and great prevalence to faulty disposal of sewage and neglect of the simplest sanitary laws. In all parts of the world typhoid fever prevails, but is especially common in temperate climates. It is more common in late summer and early autumn, but occurs at all seasons of the year.

Typhoid fever is especially frequent among young, robust individuals and very rare in children under two years of age. Cases of influenza with associated catarrh of the gastro-intestinal tract may be followed by typhoid fever.

The bacillus typhosus is distributed in recent infections in the solitary follicles and Peyer's patches of the intestines, in the mesenteric glands, spleen, bone-marrow, liver and in the bile, they have been isolated from foci of suppuration in various parts of the body; their presence in the blood and rose spots has been demonstrated and in the course of the second week and afterwards they can be isolated by culture methods from the stools, also met with in the blood, urine, sputum and in a few instances have been found in perspiration.

Outside the body, typhoid bacilli retain their vitality in water, snow, ice, the superficial layers of the soil, dust and in the feces, for periods varying from several days to many months. Infected water is the ordinary means of transmission, by such water the infection of milk, uncooked vegetables, salads, fruits, oysters and clams, and it has been shown that lobsters also may become infected. Flies and atmospheric dust play an important part in the dissemination of the disease.

The open latrines and unscreened messtables were largely responsible for the terrible epidemics among our recruits in the practice camps at the time of the Spanish-American war.

Typhoid carriers are frequently the medium of transference, especially among cooks, and it has been found among sailors that have nothing to do with the handling of food, but by means of an open tank of drinking water, which becomes contaminated by the carrier's hands in dipping water from the tank,

The autogenous typhoid vaccines have been used on typhoid carriers, but without any curative effect.

When the bacilli find their way into the intestinal tract, the evolution of the disease is as follows: Being resistant to dilute acids, they are by no means wholly destroyed by the hydrochloric acid of the gastric secretion. If the acid be absent or the water or other fluid containing them be ingested, when hydrochloric acid is not secreted, they pass into the intestine and colonize and multiply in the lymph structures, finding their way into the mesenteric glands and thence by means of the blood to the spleen, liver, kidneys and bone-marrow. In these locations and elsewhere they form soluble toxins, which circulating in the blood, exert their influence especially upon the nervous system and the nutrition and thus give rise to fever and other constitutional symptoms. A general infection with the bacilli without localized lesions known as typhoid septicemia sometimes occurs.

The period of incubation varies upon the average between ten days and three weeks, this period runs its course without symptoms, provided prodromes are not included.

During the prodromal stage, the onset is very rarely abrupt, as a rule it is preceded by a period of impaired health, characterized by malaise, feebleness, indisposition to bodily or mental effort, loss of appetite, headache, vertigo and disturbed sleep.

Abdominal uneasiness, even pain and diarrhœa are often present at this time. Slight but transient rises of temperature may occur, also bleeding at the nose is common.

An attack of typhoid fever begins with a distinct and sustained elevation of temperature, the rise is frequently attended with chilliness, which may be repeated, but rarely by a pronounced chill. During the first four or five days, the temperature rises in the evening from one to two degrees higher than upon the previous evening and each morning a degree or more above that of the preceding morning. By this time the temperature has reached its fastigium, 103°-105°, and with slight morning remissions remains, in the absence of complications, at this level until the end of the second week. During this period there are lassitude, headache, anorexia, thirst, a hot, dry skin, diminished urine and restless sleep.

The headache becomes more severe and is attended with tinnitus aurium and delirium. The tongue is coated and is seen to be of a bright red color at the edges and tip, "red tongue fever"; at this stage constipation is the rule, but laxatives act with unusual energy.

Toward the end of the first week spontaneous diarrhea often occurs; there are cases, however, in which constipation continues throughout the attack. The spleen is found, upon palpation, to be enlarged toward the end of this period; there is slight tympanitic distention of the abdomen and tenderness in the ileocecal region. A few scattered medium sized dry rales may usually be heard upon auscultation of the lungs. The pulse is rapid, usually between 90 and 110, but less so in proportion to the rise of temperature than in many other acute diseases.

During the second week, the fever assumes the subcontinuous type, the range be-

tween the evening rises and morning remissions not greatly exceeding those of health.

The symptoms become more severe, about the tenth day the headache spontaneously ceases and is replaced by somnolence and stupor, which alternate with delirium, usually wandering but sometimes noisy and active. The facies is dull, faintly flushed, sometimes slightly cyanotic. The lips and tongue are dry and a tendency for sordes. to collect upon the teeth and gums. Diarrhœa and tympanites are aggravated, there is decided enlargement of the spleen and between the sixth and tenth days the eruption makes its appearance, commonly upon the abdominal and lower thoracic regions anteriorly. Traces of albumen are found in many of the cases.

During the third week, the temperature assumes the remittent type, showing morning remissions of increased length, the pulse becomes more feeble and frequent (119-140), there is muscular tremor. Diarrhæa and tympanitic distention of the abdomen may increase; if previously absent, it may now appear. Weakness is most marked and wasting conspicuous, stupor and delirium continue. The rash now, as a rule, gradually diminishes and does not, in most cases, again appear.

This is especially the period of severe complications, hypostatic pneumonias, bed sores, parotitis, hemorrhage and perforation.

During the fourth week the fever is intermittent, the morning remissions gradually falling to normal or slightly subnormal ranges, and the evening rises progressively diminish until they no longer transcend the normal. The tongue becomes clear and moist, the diarrhœa ceases and there is a rapidly increasing and urgent desire for food. The spleen undergoes involution, the tympanitis subsides, the pulse becomes stronger and fuller. The foregoing sketch represents a severe attack of typhoid fever unmodified by treatment and terminating in recovery.

The problem in diagnosis is to determine,

not the nature of a well-defined typical case of typhoid fever, but to recognize the atypical cases and to differentiate them from the affections to which they present features of resemblance and to do this successfully at the earliest possible moment, since failure in this respect leads to indifference in regard to the search for the cause of the attack on the one hand and neglect in the proper treatment and disposal of evacuations on the other.

W. L. Wood, M. D., New Smyrna, Fla.

No other one branch of therapeutics has received the attention in the past few years as that which has been devoted to the use of vaccines and sera. These methods of treatment are entirely due to the magnificent work of Dr. Pasteur and after him Lister, Jenner and some others who have made valuable contributions. It is my purpose to present to you a few of the more important facts concerning this particular form of therapy.

Vaccine therapy is the treatment of disease by a preparation of killed bacteria, suspended in a normal saline solution and which is injected for the purpose of raising the opsonic index of the patient suffering from the infection by that particular form of micro-organism. The object of this therapy is to produce an immunity in the individual affected. Immunity may be either active or passive, depending on the nature by which it is obtained. Active immunity may be brought about in a number of various ways, one of which is by the person having a certain disease, say smallpox, and in the future he becomes immune to another attack. Acquired immunity may be brought about by inoculation with attenuated micro-organisms or by beginning with small doses of virulent organisms and gradually increasing the dose until the person becomes resistant to a quantity of the infection that would have, if injected in the beginning, produced death. The acquired tolerance for morphine by the habituate illustrates this method.

Passive immunity, however, is obtained by the injection of a serum made from the blood of an animal that has previously been made actively immune by some of the methods just given. This serum contains the resisting force or antibodies to that infection to which he has been made actively immune, and it is administered to an individual who has not the power of manufacturing enough of these antibodies to overcome the virulency of the infection from which he is likely to suffer. An example of this is the use of antitoxin in diphtheria.

In order that we may better understand the action of these immunizing agents, it is best to review some of the more acceptable theories of immunity. I will necessarily have to be brief, for they are in themselves exhaustive subjects. The first to be considered is the theory of phagocytosis advanced by Metchnikoff. He believes that the phagocytes or polynuclear leucocytes of the blood stream have the power of devouring the bacteria and of digesting them. And that the cure of the disease depends on whether or not there are a greater number of phagocytes or of bacteria. These phagocytes are amoeboid in character and have the power of going from place to place, depending on where the infection lies. They also have the power of passing through the vessel wall by means of their pseudoppia and combating the bacteria at their source of entrance. When these cells go to place of infection it is called positive chemotaxis and when there is a focus of infection and no effort is made by the phagocytes to go there it is termed negative chemotaxis on their Phagocytosis may be intensified in a number of ways, especially by the introduction of blood serum from animals that have been immunized from that particular disease. It has been demonstrated that this

^{*}Read before the Volusia County Medical Society at Daytona, December, 1915.

serum has certain substances which render the bacteria more easily digested by the phagocytes. To these substances have been given the term opsonins. They are present to a certain extent in normal individuals, but more so, by far, in animals that have active immunity. The process by which the opsonins render the bacteria inert is called For therapeutic purposes sensitization. killed bacteria are used and when injected at first there is followed a lowered phagocytic action which is called the negative phase and this, in a few days is followed by a rise in phagocytic power and is termed the positive phase. The injection of these killed bacteria is called vaccine therapy.

The other main theory of immunity is the side-chain theory demonstrated by Paul Ehrlich. This is now generally accepted the more reliable. Ehrlich believes that each cell possesses certain chemical affinities which enable it to attract and attack certain substances that are necessary for its nutrition. These chemical routes possessed by the cells are called receptors. Toxins are attracted to the cells by receptors in the same manner as in nutritional substances. Therefore, if poison is attracted to a cell and there are more molecules of that poison than there are of receptors, then that cell is destroyed, but if, on the other hand, there are more receptors then the poison is neutralized and the cell is saved. If the cells are attacked very much, then there is a tendency for them to manufacture more receptors and as they continue to do this, unless they are overwhelmed by the poison before they can accomplish this purpose, the poison is neutralized and there is an excess of receptors turned loose in the blood These free receptors are termed stream. antitoxins and are capable of making that individual actively immune, and able at once to throw off any subsequent attack, by having an excess of antitoxins for the toxin liberated by the bacteria causing that particular disease. The scope of this paper does not permit a discussion of cytoclysis or bacteriolysis, which are such integral parts of Ehrlich's theory of immunity.

The agents used in the production of these forms of immunity are sera and vaccines. There is marked difference between a serum and a vaccine. For instance, there are certain bacteria that are exoteric, that is, they liberate a poison in the culture media in which they grow and it is extracellular in character. The diphtheria bacillus is an example of this form of bacteria. In this case we have to use an antitoxin to neutralize the toxin liberated by that bacillus before it can do sufficient damage to the body and also to give the body time to manufacture substances to kill the bacteria. Here the action of the bacteria is purely a chemical one. As has been said before, we obtain this serum from an animal that has been made actively immune by drawing its blood and obtaining the serum from the clot.

By far the greater number of bacteria have what are known as endotoxins and they are only liberated when the bacterium dies. In this case we have to use a vaccine or by injecting a number of killed bacteria which will allow the body to produce antibodies to neutralize these and have an excess left to combat further attacks on the part of the bacteria. Thereby gradually increasing the injection of these killed bacteria there is left in the body a large number of these antibodies to protect it against subsequent attacks of that particular disease. The administration of typhoid vaccine illustrates this form of therapy.

The methods of preparation of sera and vaccines are essentially different. For example, in the preparation of diphtheria antitoxin, a pure culture of the diphtheria bacillus is obtained and from this its exoteric toxin is injected into a healthy horse in gradually increasing doses. And it will be noticed that after each dose there is followed a rise in temperature showing the reaction of the horse in manufacturing antitoxin. After several doses there is no rise in temperature, which shows that the horse

has manufactured an excess of antitoxin and can immediately neutralize all the toxin injected. The horse is then bled under sterile precautions and the antitoxin obtained from the blood serum and standardized. A unit of antitoxin is that amount required to neutralize an amount of toxin that would kill a guinea pig of a certain weight. Now, in the preparation of vaccine the bacteria causing the disease are isolated and grown on suitable culture media for about eighteen to twenty-four hours and then the culture is scraped off and emulsified with a normal salt solution. It is then sterilized by the addition of a five per cent carbolic acid solution or by heating at about 50° Centigrade, for a certain length of time. The best form of vaccine is the autogenous, which consists in the isolation of the bacteria causing the disease in the individual affected and growing this particular organism on suitable culture media from eighteen to twenty-four hours. It is then prepared the same as other vaccines. The ordinary stock vaccine, that is generally used by the practicing physician, is prepared from organisms grown on culture media in the various biological laboratories in this country.

The most valuable guide to the dosage of sera and vaccines is the opsonic index. The size of the dose depends upon whether or not the positive phase does not occur or the negative phase lasts too long. A high temperature contraindicates the use of vaccine. Vaccine should be given in stated doses while the dosage of sera, such as the diphtheria antitoxin, should be given according to the gravity of the disease. In general terms the doses of the several vaccines are given below:

Staphylococcus, 100,000,000 to one billion.

Streptococcus, 5,000,000 to two hundred million.

Gonococus, 50,000,000 to eight hundred million.

In giving typhoid vaccine it is the cus-

tom to begin with five hundred million at the first dose, and at the end of ten days inject one billion, and in another ten days one billion more are given. The dosage of diphtheria antitoxin has greatly increased in the past few years. It is now customary to start with ten thousand units and in six hours twenty thousand and in another six. if there is not a decided improvement in the condition of the membrane, then another twenty thousand units are given. As high as fifty to one hundred thousand units have been given with excellent results. The technic used in the administration of these vaccines is very simple. An area, say on the insertion of the deltoid muscle, is sterilized with iodine and alcohol and the vaccine is injected just under the skin with a sterile syringe just as an ordinary hypodermic is given.

The value of the use of sera and vaccines is clearly shown by the use of the typhoid vaccine in the United States army. The results obtained there show that the use of this vaccine is even more efficacious than the use of smallpox vaccine in that disease. Statistics, as compiled by Major Russell of the U. S. army, show that the typhoid rate has been reduced in the past twelve years from 9.43 per thousand to .26 per thousand, or a reduction of over 97 per cent, while the death rate fell from .64 to .03 per thousand, or a reduction of over 93 per cent. These conditions were entirely brought about by the use of typhoid vaccine. As to the danger of its administration, over two hundred thousand men in the army have been immunized with typhoid vaccine without a single fatality. This immunity is supposed to last from two to five years, but it is best to be vaccinated every two or three years. The great reduction in the mortality of diphtheria, since the discovery of its antitoxin, unquestionably shows the value of the use of antitoxin in that disease.

In this paper, gentlemen, I have endeavored to present the facts of this subject as clearly and as understandingly as I could, leaving out as much technicality as possible. This being such an exhaustive subject, I am afraid that I have not gone into detail as much as I should have. Of course, I do not claim any originality for the contents of this paper, for everything I have here has been taken from collateral readings.

PROPAGANDA FOR REFORM.

FRECKLE AND BEAUTY LOTIONS. — The worthlessness and, in many instances, the dangerous character of nostrums sold as freckle removers and beautifying preparations are indicated by the following analyses, taken from the reports of various state chemists: Hill's Freckle Lotion was found to be a 1.84 per cent solution of corrosive mercuric chloride. Kingsbery's Freckle Lotion was found to be a solution of corrosive mercuric chloride containing 5.3 parts in 1000. Kulux Compound, a "prescription fake" freckle and tan remover, was found to contain zinc oxide, bismuth subcarbonate, glycerine and water. Mrs. McCorrison's Famous Diamond Lotion No. 1, said to remove moths, freckles, pimples, etc., was found to be essentially a solution of 28.2 parts of corrosive mercuric chloride in 1000 of water. Neroxin, a "prescription fake," said to remove blackheads, was found to contain borax 55 per cent and "soda" 25 per cent. Othine, sold as a freckle remover, is reported to contain bismuth subnitrate and ammoniated mercury with a fatty base. Perry's Moth and Freckle Lotion Compound was found to be a 16-in-1000 solution of corrosive mercuric chloride containing in addition a small amount of a lead salt. Pyroxin, sold on the "prescription fake" plan as an eyebrow and eyelash grower, was found to be perfumed vaseline. Rose-Kayloin, advertised in fake health departments of some newspapers, was found to contain 80 per cent sulphate and 15 per cent potassium carbonate. Mme. Rupert's Face Bleach is reported to be a

4-in-1000 alcholic solution of corrosive mercuric chloride, containing Stillman's Freckle amount of benzoin. Cream was found to be an ammoniated mercury paste. Tan-A-Zin, a complexion beautifier, was found to have for its essential ingredient ammoniated mercury. Sarah Thompson's "Wrinkle Lotion" was found to contain alum ? per cent, glycerine 29 per cent and water 64 per cent. Zintone, said to produce a faultless complexion quickly, is reported to contain borax 23 per cent, stearic acid and soap ?? per cent. Though the external use of mercury salts is fraught with danger, the nostrums above shown to contain such poisonous ingredients are sold with the claim that they are practically harmless. (Jour. A. M. A., Nov. 20, 1915, p. 1835, and Nov. 27, 1915, p. 1933.)

VERACOLATE. The Council on Pharmacy and Chemistry reports that "Veracolate (plain)" (The Marcy Co., Boston, Mass.) is semisecret in composition, unscientific in combination and exploited under unwarranted claims. It reports that the same criticisms apply to "Veracolate with Pepsin and Pancreatin" and "Veracolate with Iron Quinine and Strychnine." "Veracolate with Pepsin and Pancreatin" is quantitative formula is given: "A compound containing the bile acids, sodium glycocholate, sodium taurocholate with cascara sagrada and phenolphthalein." "Vercolate with Pepsin and Pancreatin" is said to contain, in addition to the indefinite "Veracolate," the two mutually incompatille ferments, pepsin and pancreatin, and oil of peppermint. The complexity of "Veracolate with Iron, Quinine and Strychnine" has increased so that this unscientific mixture is claimed to contain seven constituents. These products are discreditable to the medical and pharmaceutical profession alike and their use is against the public good. (Jour. A. M. A., April 24, 1915, p. 1440.)

TAUROCOL.—The Paul Plessner Co., of Detroit, Mich., markets Taurocol and Taurocol Compound Tablets. The company makes a pretense of giving the formula minus any quantities-thus: "Taurocol is a combination of bile salts, extract of cascara sagrada, phenolphthalein and aromatics." Taurocol Compound Tablets are said to contain, in each,"Taurocol (Bile Salts)" gm. .1296, "Pepsin 1-3000" gm. .0324, "Pancreatic Ext." gm. .0324, "Extract Vomica" gm .0081 and "Aromatics" q. s. The Council on Pharmacy and Chemistry points out that the composition and the therapeutic properties claimed for preparations are essentially the same those claimed for Veracolate and Veracolate with Pepsin and Pancreatin. It reports that the objections made to these also apply to Taurocol and Taurocol Compound Tablets. (Jour. A. M. A., April 24, 1915, p. 1441.)

THE OXYPATHOR.—An order forbidding the use of the United States mails has been issued against the Oxypathor Company, Buffalo, N. Y., and its branches at Columbus, Ohio, and Wilmington, Del. The Oxypathor consists essentially of a piece of nickel-plated tubing filled with inert material, sealed and having attached to each end a flexible cord with a garter-like attachment at the free ends. This outfit was sold with the absurd claim that it caused the absorption of large quantities of oxygen through the skin of the user. (Jour A. M. A., May 8, 1915, p. 1600.)

VENARSEN.—The Council on Pharmacy and Chemistry reports that while formerly Venarsen was marketed with indefinite statements as to its identity and in a way to suggest analogy with salvarsan, it is now admitted to be essentially a sodium cacodylate solution, each ampule containing about 9 grains sodium cacodylate, 1-40 grain mercuric iodid and 3-4 grain sodium iodid. The Council finds the therapeutic claims made for Venarsen to be exaggerated and unwarranted and holds the administration

of sodium cacodylate and mercuric iodid in fixed proportions intravenously to be an irrational procedure. (*Jour. A. M. A.*, May 22, 1915, p. 1780.)

NOMENCLATURE OF DRUGS.—The first requisite of successful prescribing is to know what one is giving. Non-descriptive or therapeutically suggestive names for drugs lead to uncritical prescribing, as has been shown by the random use of heroin and the untoward results from AtoxvI. Often proprietary names make it possible to charge an exorbitant price for a well-known drug, as when hexamethylenamin is sold as Uritone, Urotropine or Cystogen and theobromin sodium salicylate as Diuretin. Since the action of drugs depends on their chemical nature, the name should at least suggest the chemical composition of the drug or its source and relationship. The lack of scientific nomenclature of drugs is discreditable and hampering to modern medicine. Physicians should eschew the fanciful or therapeutically suggestive names provided by manufacturers and give preference whenever possible to non-proprietary descriptive names for drugs. (Jour. A. M. A., May 29, 1915, p. 1853.)

THE N. F. IMITATION OF ELIXIR LACTO-PEPTINE.—Nearly forty years ago the essential worthlessness of Lactopeptine brought to the attention of the pharmaceutical profession. In spite of this knowledge the pharmacists have included imitations of Lactopeptine and Elixir Lactopeptine in the National Formulary under the titles Compound Powder of Pepsin and Compound Digestive Elixir. The N. A. R. D. Journal, devoted to the business rather than the professional side of pharmacy, defends the Compound Digestive Elixir on the ground that "physicians keep right on prescribing it." The pharmaceutical profession should consider that pharmacists will in the end lose the confidence of the medical profession and the public by the tolerance of worthless pharmaceuticals. (Jour. A. M. A., Oct. 23, 1915, p. 1467.)

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VOLUSIA COUNTY NUMBER.

We have frequently stated in these columns that THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION can be made just as good a journal as the members of the Association desire to make it. The medical profession in Florida is as representative a body of medical men as exists in the country and if each member will do his share which, with six hundred members in the state organization, only means an occasional contribution, there is absolutely no doubt that we can maintain a state journal second to none.

This number of The Journal is dedicated to the Volusia County Medical Society, and we hope from time to time that we may have special numbers representing other county organizations.

The Volusia County Medical Society is a live organization, in fact one of the best in the state. We congratulate the officers and members on its being one of seven county organizations in the state whose total membership was paid up for the last fiscal vear.

THE NATIONAL BOARD OF MEDI-CAL EXAMINERS.

"Until about forty-five years ago, only one or two states had any laws regulating the practice of medicine, and until 1882, no state required an examination. At that time in the majority of states a diploma from a medical college was all that was necessary to obtain for its holder the right to practice. The physician who desired to move to another state was put to no particular hardship, since all he had to do was to present his diploma. By 1902, however, the number of states in which the examination of all applicants was required had been increased to thirty-eight. The 'scrap of paper' called a diploma ceased to have value except to the extent of admitting its holder to the licensing examination—an ordeal which few men who had been in practice for several years could pass, at least without the sacrifice of much time and labor for a review of the fundamentals of medicine. Important as was such an examination for the recent graduate in order to prove his training in those fundamentals, it consisted largely of nonessentials for those who had long been in active practice.

"In order to correct this apparent injustice to practitioners of medicine, a system of reciprocity was devised; the state board waived its right to test the qualifications of the applicant, and accepted the certificate of another board in lieu of its own examination. Even at present the provision made for reciprocity provides for only a small proportion of the instances in which physicians, for good reasons, desire to move from one state to another.

"Fourteen years ago The Journal of the American Medical Association," from which this comment is taken, "called attention to these conditions, pointed out that only nine states remained in which a physician's diploma would entitle him to secure a license without the examination, and recommended a voluntary national board of medical examiners as the most practical solution of the problem. At that time the three government services in Washington were suggested as the basis for the creation of this national board. It was also shown that the educational standards should be sufficiently high and the character of the examination so practical and thorough that the qualification thus secured could be recognized by the licensing boards of the various states. As announced about three months ago, a definite movement was under way and, as shown on page 762 this week, the creation of such a board is now an accomplished fact.

"No scheme could be adopted which would not be subject to criticism for some reason or other, but the plan on which this board is created appears to leave little ground for criticism. Since it is a voluntary board, its certificate need not be accepted by any state licensing board unless it sees fit to do so. On the contrary, this board will

be in position to conduct an examination more thorough and more practical than could be possible by individual licensing boards. The recognition of this board's certificate, after its value has once been established, will be under the exercise of the same discretionary powers of the state board as is employed at the present time in the recognition of the certificate of another licensing board. In both instances the licensing board accepts a recognized certificate of qualification in lieu of its own examination.

"Heretofore the great obstacle to the establishment of a national board has been the lack of sufficient money to meet expenses until the board could me placed on a self-supporting basis. This need has been met by the Carnegie Foundation for the Advancement of Teaching, which is providing the necessary funds.

"The first examinations are to be held in the city of Washington, where adequate laboratories, equipment and clinical material have been placed at the disposal of the board. The ultimate success of this board, however, requires that the examinations be held in different sections of the country, since few medical graduates will go to the expense of a trip across the continent to take such examinations. Any high grade university medical school will doubtless be glad to place its laboratories and ample laboratory apparatus at the service of this board, and also to guarantee an adequate amount and variety of clinical cases to meet the needs of the examination.

"The board has important problems to solve," says *The Journal*, "the possibilities for good that rest in the board, both as regards the public and the medical profession, are so great that careful deliberation should precede every step taken toward the solution of these problems. One mistake may put back for a decade this movement, which is now so promisingly started. By the success of this undertaking, not only will the standard of the medical profession be

improved, but the public also will be benefited."

DID YOU BITE?

"Do you want five dollars? If so, and if you are a sufficiently prominent physician, the 'patent medicine' interests will gladly send it to you. Possibly it will be for a mailorder diagnosis and treatment. For example: You may receive a letter from a lady in some outlying country town who says that she has heard of your skill in treating diseases peculiar to women. She has a daughter who is suffering from dysmenorrhea, menorrhagia or what not and she is afraid that the girl will 'go into consumption.' Enclosed please find a money order for five dollars. Will you not kindly send her a prescription (preferably in liquid form) for the purpose of helping her daughter's condition? Of course, diagnosing disease in and prescribing for patients one has never seen will hardly qualify as the scientific practice of medicine. But the 'patent medicine' interests are apparently willing to part with all the five-dollar bills that are necessary in order to obtain these long-distance prescriptions and diagnoses. Possibly, however, a

variant is tried. You may be called up by phone and a man will tell you that his wife is suffering from some ailment peculiar to her sex and desires to be operated on. What will you charge for the operation? You may mildly suggest that this question cannot intelligently be answered until you have seen the lady and gone into the case thoroughly. Then the gentleman at the other end of the wire will ask you whether it is not a fact that you charge according to the ability of the patient to pay rather than according to the seriousness of the operation. Or possibly the scheme may have yet another angle. If you are a rather wellknown internist or a gynecologist of note an attempt may be made to get you to write a prescription containing, as at least one of the ingredients, viburnum prunifolium—a preparation not unknown to the 'patent medicine' world. Many other changes are being rung, for this is a time of stress with 'patent medicine' fakirs, and in order to defend their nefarious trade they are seeking to manufacture evidence of the argumentum ad hominem type. Such evidence may be considered valuable in prosecuting libel suits against the medical profession."— Jour. A. M. A., Feb. 19, 1916.

Cancer Department

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

A FORTUNATE DECISION.

Mr. W., a man of robust health, a farmer, fifty years of age, went into a doctor's office to consult him, giving the following history:

Last August he had a crop of fever blisters on his lower lip, which lasted about three weeks, all of them disappearing except one. This one had several scabs form on it but each time the scab came off it left a small ulcerated area. Finally about October it healed up smoothly, but left a small white thickened area in its place which had been there ever since, increasing somewhat in

size. It was not at all painful, but worried him some by its presence. He said that he had consulted one doctor who told him he could take it off with a paste. This treatment he refused because he said he knew of one of his friends who had had a similar thing treated with paste, and that the paste had "eaten his whole lower lip off." The doctor whom he consulted recognized the potential danger of the growth, and advised its immediate removal. To this the patient readily consented, after having the condition explained to him. Within a half hour afterward the suspicious area, with a wedge

shaped piece of the lip was removed under novocain anæsthesia, with absolutely no pain, the promise of a hardly noticeable scar, and the relief of knowing that it was completely eradicated. The section was sent to the State Board of Health Laboratory the same afternoon, and three days later the following letter was received:

Dr. ————,

Dear Doctor:

The section of lip of Mr. W., which you submitted to us for examination shows the following changes: The germinal layer shows some thickening and an alteration in morphology and staining reaction. While there is no distinct tumor mass, the underlying connective tissue is fibrous and shows enlargement of nuclei such as is characteristic of a precancerous condition. We consider it very fortunate that he has had the area removed at this time as in all likelihood there would have been developed a definite cancerous growth there in a short time.

Yours very truly,

Dr. ———,

Florida State Board of Health.

If this man had waited six months longer he would most surely have had to have an extensive operation, with not nearly so good a chance of permanent cure.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTION.

Health conditions will be linked with nearly every phase of the problems of charity and correction to be considered at the forty-third annual meeting of the National Conference of Charities and Correction at Indianapolis, Ind., May 10th to 17th. One section, that on health, will be devoted entirely to a discussion, by physicians, of the part the medical practitioner and surgeon may play in social work.

Dr. J. N. Hurty, secretary of the Indiana State Board of Health, is chairman of the section on health, and Dr. Theodore B. Sachs, of the Municipal Tuberculosis Sanitarium of Chicago, is vice chairman. In the general session devoted to subjects of wider popular interest Dr. Eugene L. Fisk, director of hygiene of the Life Extension Institute, New York, and Professor L. J. Rettger, of the Indiana State Normal School, will discuss longer and more effective living.

In the section meetings there will be a symposium on disease, ill health and sickness, and their bearing upon crime, insanity and poverty. The speakers will be Dr. David C. Pevton, superintendent of the Indiana Reformatory, and Dr. S. E. Smith, superintendent of the Eastern Hospital for the Insane, at Richmond, Indiana. Dr. E. R. Havhurst, of the Ohio State Board of Health, will lead a discussion of industrial hygiene. The relation of venereal diseases to public and individual health will be considered by Dr. C. S. Woods, superintendent of the Methodist Hospital, Indianapolis, and Dr. William F. Snow, secretary of the American Social Hygiene Association. A number of dental surgeons will also participate by giving their views on the relation of oral hygiene to public and individual health.

Other sections allied in subject matter to that on health will take up the problem of inebriety and the relation of feeble-mindedness and insanity to social questions. The former division of the conference will make a distinct contribution by presenting the results of an inquiry among large employers as to the results attained from their prohibition of drinking among employes.

A broad field of community problems will be covered by six other sections of the conference. That on the family and the community will take up the co-ordination of civic effort in small communities. In its general session it will consider conditions adverse to efficient public work under democratic government.

A section on unemployment will examine into the degree to which social workers are prepared for the next period of stress. Graham Romeyn Taylor, of *The Survey*, is in charge of a section on the promotion of so-

cial programs, in which representatives of labor, business men, editors and public officials will give their ideas on the relation of social workers' programs to the community in general.

The growing tendency to put relief work in the hands of public agencies will occupy much of the attention of a section on public and private charities. Problems connected with the organization and administration of charity work and the keeping of proper records will also be discussed.

The conference will be opened on the evening of May 10th with an address by the president, Father Francis H. Gavisk, in which the keynote of the entire gathering will be struck. A talk of exceptional public interest will also be given at this inaugural session by Ernest P. Bicknell, director of civilian relief of the American Red Cross. Mr. Bicknell will discuss war relief and his own experiences close to the firing lines in the various European war zones.

POISONOUS FLY PAPERS.

A year ago, in discussing this subject editorially, we gave a partial report of the cases of arsenic poisoning of children from accidentally consuming the contents of fly-destroying contrivances during the summer of 1914. It was gratifying to note the number of medical journals that reprinted our editorial or commented upon the subject. The discussion was evidently a timely one.

For the summer of 1915 we have been able to secure the reports of the following

cases:			Recovery	Recovery
Month	No.	Fatal	Indicated	Doubtful
May	1	1		
June	5			5
July	5	.5	5	1
August	14	$\tilde{\cdot}$	8	1
	_		—	_
Totals	55	8	10	4

These cases were reported by the daily press as occurring in the following states: Georgia, 1; Illinois, 6; Indiana, 2; Iowa, 2; Massachusetts, 2; Michigan, 2; Missouri, 1; Nebraska, 1; New York, 1; Oklahoma,

1; Ohio, 1; Pennsylvania, 2; a total of twenty-two cases. This report must necessarily be considered as very incomplete and but an indication of the possible extent of a wholly preventable danger.

We again point out the fact that the symptoms of arsenical poisoning are very similar to those of cholera infantum and that undoubtedly a number of the cases of cholera infantum that occurred were really cases of arsenical poisoning, and death if occurring was attributed to the fact. The cases reported were of children ranging in age from 1 to 6 years. These little patients are not old enough to tell what they have taken when questioned as to their illness and unless they are seen consuming the fly poison the actual cause of their sickness or death is overlooked and the fatality ascribed to cholera infantum or to some other similar causes and the error in diagnosis goes undetected.

We repeat, arsenical fly destroying devices are dangerous and should be abolished. Health officials should become aroused to prevent further loss of life from their source.

Our Michigan Legislature, this last session, passed a law regulating the sale of poisonous fly papers. Similar enactments should be secured and enforced in every state in the Union.—The Journal of the Michigan State Medical Society.

THE CONTROL OF DIPHTHERIA EPIDEMICS.

The whole subject of the control of epidemics of diphtheria may be briefly summarized as follows: Methods commonly employed in the fight against diphtheria are not adequate; Schick's test requires no special technic that can not be easily developed by any physician and, therefore, is available to all. Schick's test is a prompt, economic and satisfactory method of quelling epidemics of diphtheria when used together with swabs.—Miles F. Porter, M. D., Journal of the American Medical Association, March 11, 1916.

Reviews from Current Literature

EARLY DIAGNOSIS OF CANCER

Manges, Morris: The General Practitioner's Responsibility in the Early Diagnosis of Cancer. Am. Jour. of Surgery, Vol. XXIX, 1915, p. 377.

Manges, after remarking the difficulties often attending the early diagnosis of cancer, and the too frequent unobserved conversion of benign growths into malignant tissue, states that, "After all is said and done, the exploratory operation remains as the only crucial diagnostic and the only therapeutic measure. If the diagnosis has been made, it is the only means of cure; if the diagnosis has not been established, it is the only means to settle the doubt, and at the same time, it may render a radical cure possible, if cancer is the cause of the symptoms. The risks of exploratory operations today are less than two per cent; they are infinitely less than those of the disease itself.

"It may be accepted as a safe rule that when in doubt about symptoms in patients at the cancer age: Don't wait—explore! When we are sure of the diagnosis, we are also sure of the inevitable result if nothing is done. The general practitioner will have done his duty when he has strongly suspected the existence of a cancer in a given case; the exact diagnosis should be relegated to the surgeon and the pathologist."

The following paragraph seems particularly pertinent: "I will admit that the conditions under which many general practitioners work are far from ideal, and if we were placed as they are, we might possibly follow in their footsteps. The fault is not altogether that of the physician, for a large share must be placed at the door of the patients, who can not or will not understand the careful physician in his endeavors to establish a diagnosis. They are not sufficiently loval to stick to one physician, or to follow his advice, or to give him sufficient time to study their symptoms. They care not for the diagnosis; they only want relief from their symptoms. It is to be sincerely hoped that the campaign of education which is being vigorously waged will in time enlighten the people as to the need of intelligent co-operation. But this is only an explanation, not an excuse. There are still too many physicians whose only aim is to palliate symptoms and not to make diagnoses. They fail to obtain proper histories; they do not examine their patients sufficiently; they allow palpable diagnoses to escape them. They permit the golden time for radical operations to slip by, since by their procrastination they convert operable cases into inoperable ones, so that when operations are finally performed they are palliative and not radical. It is here where the great reduction in cancer mortality is to be immediately obtained."

The author believes that, except in a few types of occupational cancer, we cannot lessen the number of malignant diseases by improved hygiene as we have reduced typhoid, tuberculosis, etc., and that the only method of reducing cancer mortality is by a campaign of education of both patients and physicians.

R. C. T.

VICARIOUS MENSTRUATION

Condit, Wm. H.: Compensatory (Vicarious, Ectopic), Menstruation: Xenomenia; Memmes Devii. Am. Jour. Obst., Vol. LXXIII, 1916, p. 238.

The author prefaces his paper by giving a detailed clinical history of a case of vicariout menstruation. He operated upon the patient in 1907 removing both ovaries and all the other pelvic organs. Fifteen days after operation she had all the subjective symptoms of the menstrual period. At the same time a nævus, the size of a split pea. situated in the left intercostal space became swollen and ecchymotic from a hemorrhage into it. The symptoms disappeared in four days. For the next 21 months the same phenomena appeared every 28 days, the nævus gradually enlarging to the size of a child's head. Finally, during one of these attacks, the tumor ruptured and then was removed surgically. For the next year the left mammary gland took the place of the nævus, becoming very much swollen and ecchymotic at the periods. The attacks finally subsided and the gland finally became normal.

Condit discusses the various theories of so-called "vicarious menstruation" and draws the following conclusions:

By many menstruation is regarded as a flow from the uterus only and as incapable of substitution by hemorrhage from any other part of the body.

Menstruation after hysterectomy and bilateral oöphorectomy has been attributed to incomplete removal of the organs in question, yet upon postmortem examination in some such cases, no such vestiges of the functional organs have been found.

Williams reports that he has noted animal menstruation recurring in cows where he was sure that both ovaries were removed completely. Operating a second time cystic Graafian follicles were found at the point of removal of the ovary.

It would consequently seem that not only may these ova exist in the tissues somewhat outside the ovary, but also that when the gland itself has been surgically removed, they are capable of developing ova sacs.

The conclusion arrived at in this study is, that menstrual abnormalities or irregularities are due to blood pressure changes in the individual, together with some atrophic or pathological changes in part or parts where the hemorrhage manifests itself. In the particular case reported, the peculiar demonstrations were brought about by the failure of the individual physical economy to adapt or adjust itself to the change brought about in the blood pressure, by removal of the part or parts previously acting as the safety valve of this particular economy.

G. R. H.

JOINT SYPHILIS

O'Reilly, Archer: Joint Syphilis in Children. Am. Jour. of Ortho., Surg., Vol. XII, 1915, p. 683.

The writer states that syphilis of the joints in children as well as in adults is

much more frequent than we suppose, and that it is often diagnosed and treated as tuberculosis, infectious arthritis, etc. The congenital type of the disease usually manifests itself in children between the ages of eight and fifteen, as a symmetrical swelling, with a variable amount of effusion, and with but little pain or interference with function. While the comparative freedom from pain is not distinctive, it should always excite suspicion and a Wasserman should be done. Muscular spasm, as in tuberculosis, is infrequent; disturbances of function are largely mechanical. Syphilitic arthritis may show itself in many ways and is most often mistaken for tuberculosis.

R C T

THE DIGESTIBILITY OF MILK PROTEIN

Holt, L. Emmett: The Digestibility of the Proteins of Milk and Their Rôle in Infant Nutrition. Archives of Pediatrics, Vol. XXXIII, 1916, p. 13.

The protein of cow's milk is more readily digested than was formerly believed, and symptoms formerly ascribed to it are due to other conditions. In practically all conditions pepsin is abundantly secreted in the stomachs of infants and the use of such ferments rests on no rational basis.

The infant needs no more actual protein than is contained in average human milk. but the protein of human milk contains in large quantity certain amino-acids which are essential to growth and development. These amino-acids exist to a smaller extent in cow's milk. Therefore, in order for an artificially fed infant to maintain a healthy growth it is essential that relatively large quantities of cow's milk protein be given. Not that the protein itself is so much needed but that large quantities of protein must be administered in order to supply the infant with the necessary amino-acids. Any excessive amount of protein within reason is utilized by the organism and is followed by increased excretion, which is nearly proportional. Hence the amount of protein contained in breast milk can not be accepted as a criterion of how much protein

is required when cow's milk is employed. No clinical or laboratory evidence has been adduced to show that protein, in reasonable quantities, is harmful.

J. D. L.

FAT IN INFANT FEEDING

Morse, John Lovett: Present Opinion as to the Rôle of Fat in Infant Feeding. Archives of Pediatrics, Vol. XXXIII, 1916, p. 20.

More than 90 per cent of the fat ingested is usually absorbed, though the absorption of fat in babies who are passing "soap stools" is less than when the stools are normal.

A healthy infant can digest and utilize the fat of cow's milk as well as that of mother's milk. Therefore, normal infants may be fed cow's milk which contains the same per cent of fat, 3 to 4 per cent, as breast milk. This statement refers healthy infants and not to those who have acquired a fat intolerance due to bad feeding. Fats and carbohydrates can not be used interchangeably beyond a certain point and an effort to supply the fat needed of an infant by feeding it excessive carbohydrates is certain to develop a carbohydrate indigestion. Many ills that have been attributed to fat in the food are due to an excess of one of the other food elements or to improper relation of the food elements to each other. When there exists an excessively acid condition of the intestinal contents the administration of much fat will render the condition worse. J. D. L.

HYDROCEPHALUS

Frazier, Charles H.: Types of Hydrocephalus, Their Differentiation and Treatment. American Journal Diseases of Children, Vol. II, 1916, p. 95.

The author discards the old nomenclature of "external" and "internal" hydrocephalus and suggests in its stead a new classification having a physiologic background, with clinical application.

He divides hydrocephalus into four types: (1) hydrocephalus obstructions; (2) non-absorptus; (3) hypersecretious: (4) occultus.

In the first variety there is mechanical

obstruction to the drainage of cerebrospinal fluid from one or more ventricles into the subarachnoid space. For this type he advises puncture of the corpus callosum as being the simplest and most effective means of securing drainage into the subarachnoid space.

For the nonabsorptive type he recommends the establishment of a drainage tract into the pleural cavity.

For those cases due to hypersecretion, rendered so by increased activity of the charoid plexus, most conspicuous aid is secured by the feeding of thyroid extract.

The occult type is characterized by an excess of fluid somewhere within the cranium without any necessary increase of cranial dimensions. This type may demand a decompression operation in order to relieve pressure.

The paper supplies clinical tests for the purpose of differentiating the four varieties of hydrocephalus.

J. D. L.

THE CAPSULE OF THE FAUCIAL TONSIL

Mahuen, G. Hudson: The Surgical Anatomy of the So-called Capsule of the Faucial Tonsil. The Laryngoscope, Vol. XXV, 1915, p. 685.

The author emphasizes the fact that while we hear much concerning the capsule of the faucial tonsil, few, if any, of us have any knowledge as to what the capsule is, where it originates and of its function, if it has any. Some question now its existence.

In discussing an intracapsular tonsillectomy he states that the expression "means a tonsillectomy in which the tonsil is entirely removed while the major portion of the capsule is left in the fauces where it naturally belongs and where it completely lines the tonsillar fossa. On the other hand, an extracapsillar tonsillectomy is one in which the entire capsule is removed, leaving an opening through the intrapharyngeal aponeurosis into the deeper regions of the neck and exposing the superior constrictor, the palatoglossus and palatopharyngeus muscles."

For a long time he has tried to determine

why it is that in some tonsillectomies there is so much cicatricial contraction with pharyngeal and palatal deformities while in others we see an entire absence of these postoperative conditions.

He believes the problem would be solved by enucleating the tonsil "not only with the least possible traumatism, but with the least possible capsule, and I think I have discovered that an intracapsullar tonsillectomy in which the major portion, at least, of the socalled capsule may be left in the tonsillar fossa, is altogether within the realm of possibility."

After discussing the anatomy of the tonsil with special reference to its capsule, he reaches the following conclusions:

The so-called capsule of the faucial tonsil is not a capsule at all in a strict sense of the term, and it consists in part, at least, of that portion of the intrapharyngeal aponeurosis in a recess of which the tonsil attaches itself in the course of its development.

The intrapharyngeal aponeurosis is a broad membrane having its attachment above to the base of the skull, and extending downward it not only separates the tonsil and the palatal pillars from the superior constrictor muscle and other important tissues in the certical region, but folds of this membrane protrude themselves between the tonsil and the pillars of the palate; the anterior fold when it protrudes itself well in front of and below the tonsil constitutes what is known as the plica triangularis or plica tonsillaris.

In the course of its development in embryo and during infancy, the tonsil appears to appropriate a portion of the connective and musculo-fibrous tissue with which it is in juxtaposition and finally in adult life it becomes firmly attached to this membrane to which has been given the name intrapharyngeal aponeurosis, and a section of which seems to constitute the so-called capsule of the tonsil.

A complete extracapsullar tonsillectomy,

therefore, must leave a window resection of the intrapharyngeal aponeurosis, not only exposing the palatal pillars and the superior constrictor muscle but opening up avenues of infection in the deeper regions of the neck.

A more desirable operation which may be called an intracapsullar tonsillectomy, or perhaps better still an intercapsullar tonsillectomy, is one in which the tonsil is removed with only the thin innermost layer of the capsule, the major portion of it being left in the pharynx as a complete lining for the fossa, where it serves as a strong wall of defense against infection in this region. This intra- or intercapsullar tonsillectomy may be done easily and accurately with an ordinary snare in connection with the original Sluder instrument.

W. S. M.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Merck and Co.:

Agar Agar Powder, Merck. Agar Agar Shreds, Merck. Berberine Hydrochloride, Merck. Calcium Peroxide, Merck. Ethyl Salicylate, Merck, Fluorescein, Merck. Formic Acid, Merck. Mercury Cyanide, Merck. Mercury and Potassium Iodide, Merck. Mercury Succinimide, Merck. Morphine Meconate, Merck. Osmic Acid, Merck. Sodium Oleate, Merck. Sodium Peroxide, Merck. Thiosinamine, Merck. Urea, Merck. Zinc Peroxide, Merck.

H. K. Mulford Co.:

Ampuls Emetine Hydrochloride 0.005 gm. Ampuls Emetine Hydrochloride 0.02 gm. Ampuls Emetine Hydrochloride 0.04 gm. Ampuls Mercury Succinimide 0.1 gm.

Ampuls Pituitary Extract 1/2 c.c.

Ampuls Quinine Dihydrochloride 0.24 gm. Ampuls Quinine Dihydrochloride 0.5 gm. Ampuls Quinine and Urea Hydrochloride 1 per cent.

Ampuls Sodium Cacodylate 0.1 gm.

Ampuls Sodium Cacodylate 0.2 gm.

Ampuls Sodium Cacodylate 0.5 gm.

Ampuls Sodium Cacodylate 1 gm.

Purified Tricresol, Mulford.

Scarlatinal Strepto-Serobacterin (Therapeutic).

Powers-Weightman-Rosengarten Co.:

Calcium Peroxide, P. W. R.

Magnesium Peroxide, P. W. R.

Sodium Perborate, P. W. R.

Sodium Peroxide, P. W. R.

Strontium Peroxide, P. W. R.

Zinc Peroxide, P. W. R.

Swans-Myers Co.:

Swan's Staphylococcus Bacterin (No 37).

Swan's Streptococcus Bacterin (No. 43). Swan's Typhoid Bacterin (No. 44; Prophylactic).

Cutter Laboratory:

Anti-Pneumococcic Serum, syringes 10 c.c.; Diphtheria Antitoxin Globulin, syringes 2,000, 3,000, 4,000, 5,000 and 10,000 units each: Normal Serum (from the horse), springes 10 c.c.; Tetanus Antitoxin, syringes 10 c.c.

Hoffmann-LaRoche Chemical Works: Imido, Roche, ampules Imido, Roche.

Standard Oil Co. of California:

Calol Liquid Petrolatum, heavy.

Morgenstern and Co.:

The Council has recognized Morgenstern and Co. as selling agent for Dolomol and the Dolomol preparations in New and Nonofficial Remedies. The Council is assured that these prepara-

tions will be marketed in accordance with its rules.

White Chemical Co.:

The Council has recognized the White Chemical Company as selling agent for Apinol. The Council is assured that this preparation will be marketed in accordance with its rules.

SWAN'S TYPHOID BACTERIN (No. 44; PROPHYLACTIC).—Marketed in packages of three 1 c.c. vials and also in packages of six 1 c.c. vials. Swan-Myers Company, Indianapolis, Ind. (Jour. A. M. A., Nov. 27, 1915, p. 1915.)

Scopolamine Stable, Roche. — An aqueous solution of pure scopolamine hydrobromide protected against decomposition by the addition of 10 per cent of mannite. It has the properties of scopolamine hydrobromide, U. S. P. It is supplied in ampules, each containing 1.2 c.c. (L c.c. contains 0.0003 gm, scopolamine hydrobromide.) The Hoffmann-LaRoche Chemical Works, New York. (Jour. A. M. A., Sept. 25, 1915, p. 1111.)

COAGULEN, CIBA.—An extract said to be prepared from blood-platelets and to contain thromboplastic substance mixed with lactose, 1 gm. representing 20 gm. dried blood. It is said to act as a hemostatic and to be useful in the treatment of certain local and certain internal hemorrhages. Solutions of Coagulen, Ciba, are used locally, intramuscularly and intravenously. A Klipstein and Co., New York. (Jour. A. M. A., Sept. 25, 1915, p. 1111.)

CALOL LIQUID PETROLATUM, HEAVY.—A non-proprietary brand of liquid petrolatum, U. S. P., said to be derived from California petroleum and to consist essentially of hydrocarbons of the naphthene series. It is colorless, non-fluorescent and practically odorless and tasteless. Its specific gravity is 0.886 to 0.892 at 15C. Standard Oil Company of California, San Francisco, Cal. (Jour. A. M. A., Sept. 25, 1915, p. 1111.)

Publisher's Notes

AGAR IN CHRONIC CONSTIPATION.

As is perhaps generally known to physicians, Agar (sometimes designated Agaragar), is a Japanese gelatin derived from seaweed. This substance has the natural property of absorbing water readily, and retaining it. It resists the action of intestinal bacteria, as well as that of the enzymes. Its use in the treatment of chronic constipation is based upon the fact that when ingested it passes practically unaltered into the intestine, where it adds to the bulk of the feces and thereby stimulates peristalsis; also it softens hard and dry fecal masses, thus favoring normal evacuation.

Parke, Davis & Co. supply a superior quality of Agar in granular form which is very convenient for use and free from the somewhat unpalatable character of the ordinary commercial product. It is marketed in pound and quarter-pound cartons.

One or two heaping tablespoonfuls, according to individual requirements, taken morning or evening, at meal-time, with milk or cream or mixed with a cereal food, usually produce the desired result.

POWERFUL ANTISEPTIC AND DIS-INFECTANT.

A solution of germicidal soap (McClintock), containing 1:5000 mercuric iodide, the active ingredient, destroys common pusproducing organisms in less than five minutes. Prof. F. G. Novy of the University of Michigan is authority for the statement.

He adds that solutions of mercuric chloride 1:1000 require more than fifteen minutes to accomplish the same result.

Germicidal soap (McClintock) is at once a sterilizer, cleanser and lubricant. It is useful for sterilizing hands, instruments, and sites of operation; for lubricating sounds, specula, etc. It is excellent for vaginal douching, as it tends to dissolve pus, blood and mucus, whereas most other germicides coagulate them. It serves well as a disinfectant wash after attendance upon cases of communicable disease; in certain surface lesions associated with fetid discharge; in skin affections of parasitic origin. It is efficacious as a deodorant in offensive hyperidrosis. In short, whenever and wherever a powerful disinfectant and detergent is required, this soap would seem to be indicated.

Germicidal soap (McClintock) is supplied in two strengths, containing, respectively, one per cent and two per cent of mercuric iodide. The stronger soap (two per cent) is marketed in large cakes only; the milder (one per cent) in large and small cakes, in collapsible tubes (a soft soap), and in cylindrical sticks (for surgical use). Parke, Davis & Co. are the manufacturers.

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ORIGINAL ARTICLES

TO PREVENT NERVOUSNESS IN CHILDREN.

Tom A. Williams, M. B., C. M., Edin., Corresp. Memb. Socs. of Neurol. and Psychol. of Paris, etc., Washington, D. C.

Nervousness is a word used in many senses. It may indicate merely ill-temper or perversity of disposition which the child has acquired from bad example or poor management. An unusual way of reacting to circumstances may on the other hand arise from a faulty brain. To prevent this, of course, the procreation of imbeciles should be forbidden. But a hereditarily adequate brain may function inadequately on account of a lack of proper blood, as in the anæmia of hook-worm disease and malaria; other diseases requiring medical treatment; or in the starvation of poverty.

Poisons may interfere with healthy action of brain cells. These need not be so gross as opium and alcohol; for the breathing of bad air is sufficient to obtund the mind. Poor assimilation will create toxins which poison the brain cells. This is disposed to by errors in diet, such as the giving of too much or too little meat and egg food to young children, or the lack of the substances found in whole grain and in fruit.

Imperfection of the glands of the body may prevent proper growth of function of the brain; the cretin is an example of this.

But even when all the physical factors are perfect, a child may become nervous from psychological influences. Over-intensity of ambition may keep him always on edge; so that his conduct lacks poise and his sleep and digestion are interfered with. The over-conscientiousness fostered by too

much religion, or repression of spontaneous activity leads to a pitiable vacillation, which causes nervous agitation and much suffering.

As a child cannot understand the full import of moral sanctions he should not be over-burdened with these; for if he seriously tries to conform to them he fails to develop will and purpose, because he is kept in perpetual doubt of the right thing to do. The scruples and doubts about the sexual functions which perturb so many young people would be entirely prevented by natural instruction of the truth about the reproductive functions. This eliminates the false shame which is the cause of much suffering.

Case 1.—Psychasthenia in a child, due to overscrupulous correction and physical disturbances.

A little girl, aged ten, the daughter of a clergyman, was seen by me four years ago. One day she would be well, the next crying, feeling miserable, tired and dizzy, with a dull headache as a result of lying in bed thinking. The preceding summer at school she had been irritable, cross, impatient, and quarrelsome with her sister. She had formerly been easy to manage and full of life and joy. Her mother was most anxious and took pains to avoid startling or fatiguing her, and in the belief that it exhausted the child, forbade the impulsive squeezing and kissing which the child frequently desired. She had noticed that the little girl was less impulsive and irritable when having something to do. Nevertheless, misguided, she took her from school and this, of course, aggravated her nervousness.

The physical examination was negative, with the exception that a slight hyeropic astigma and a variable visual acuity without apparent cause was found by Dr. F. N. Chisholm, who referred her to me.

Psychically, intelligence was normal. She was timid, hyperconscientious, and much concerned for having been reproved for impulsive shouting, for violent hugging of her parents, and because of some eau de cologne they thought she took. had really been taken by a little sister, who was punished for it. She was sometimes so unhappy and miserable that she did not want other children near her, and she was most unhappy because she was not allowed to show her affection for her father and mother of whom she is very fond, more especially of the latter. Her dreams are rare, but she recollected one of a whitebearded man who dragged her from the bed by her hair and another of a wild animal trying to eat her. I could not at the time obtain any associations from either of these, and, indeed, I was more concerned relieving without delay the intensity of the repressions which made the child's life a burden.

A physical factor complicated the case, the child eating excessively of meats and oatmeal, and making her principal meal at night. I believe this was the initial cause of the irritability of temper and the impulsiveness which led the overconscientious parents to repress overmuch.

The little girl's syndrome was far from a fully developed psychasthenia; but the case shows beautifully how that disorder may commence and be fostered by injudicious management.

Treatment: Mid-day dinner was prescribed, and a supper mainly of carbohydrates and fruit, after which she should not go to bed for at least an hour. On waking in the morning the child was instructed to make a practice of getting up and going outside instead of ruminating in bed. The parents were told to avoid nagging her

about trifles, and her behavior was to be left to take care of itself at present. Her affections were to be indulged too. As a result, "nervousness" ceased and the child returned to school in two weeks, and she has remained well and happy ever since.

Case, 2.—Well-developed psychasthenia in a child with multiple expiatory manias, due to hyperconscientiousness caused by too scrupulous upbringing originating in the reproof of jealousy; cured by reeducation based on insight.

A boy, aged thirteen years, was referred by Dr. Guy Latimer, of Hyattsville, Md., because of extreme timidity, many "nervous" tricks, and an inability to concentrate his attention. The most conspicuous symptoms were an arithmomania, a mania for verification, including a "desire de toucher" and a "manie du sort," one of the forms of which was the imperative need of lying on his back on the floor at frequent intervals while dressing in the morning. These various mannerisms intermitted and replaced one another.

Mechanism: Analysis revealed that all were in reality expiatory penances for a jealousy for his little brother, which had already begun at the age of three, when he had asked that the baby be thrown from the window, and once banged his head on the floor when enraged. He himself had always been much petted, and he craved for it. It was the reproval of an aunt which first created the shame for his jealousy and led him to make penance in this fashion. Latterly he had been urged to cease his peculiarities, and can stop any of them when on the alert by a hard struggle. His distress at doing so, moreover, soon passes away. But his frequent absence of mind in day dreams, which he loves, interfered with his endeavors. This tendency was favored by his not having been allowed to play the games of which he is fond with the boys in the neighborhood, which is rather a rough one.

This desire for expiation began when he

was aged between three and four years, by thinking it was mean not to give his toys away, so he gave them all to his brother. He was told that it was naughty to be jealous, and he felt ashamed, but did not cry, but just sank into himself and said nothing. He still reproached himself. If his mother did not pet him for a week he thought she did not care for him and so would be unhappy.

He does not know the reason why he is jealous of his brother, for he loves him, and they do not quarrel much, even when the other cheats at play. It is in the morning and at night that he is most beset by his manias, and he feels things would go wrong for the night or day if he did not perform them. He declares, "I always seem to want to do something I do not want to, because I do not want to." He does not know why. He has no shame of body or sex, as he has been fully instructed. He is very religious, believing in heaven and hell, that he must be good, and feels that he ought to make himself sad because he does not like to be sad; but he is so prone to sadness that even as a baby, music made him cry. So conscientious is he that he undertakes every task with too great violence, quickly becomes exhausted, and then has to fight against the dreamy tendency which supervenes.

Treatment: Having explained together the genesis of his desire for penance, we decided to concentrate attention upon only one of his manias at a time, in order to break one by one the habits he had formed, and he was to take up carpentry work in order to combat the tendency to day-dreaming. His diet was also rectified.

More and more control was soon obtained. On last hearing from him, he had taken a position, and had overcome his disabilities.

In most instances, however, the irksomeness to conform is so great that the children find refuge in inattention, which leads to slovenliness of conduct through non-devel-

opment of the power of reflection and selfcontrol; so they grow up with the habit of acting without judgment and are easily swayed by others of their own whims.

These become the hysterical people, who form the bulk of the followers of new and peculiar movements which give powerful suggestions of cure for disease. But a commoner cause of hysteria is neglect of careful thinking and judging, due to slovenly upbringing, which does not teach self-control.

Case 3.—Hysterical impulsiveness to fears causing attacks, mistaken for epilepsy, due to the suggestion of danger by the mother's timidity; lack of inhibition; cure by giving insight and teaching self-control.

· A boy of eight was seen with Dr. A. L. Tynes, at Staunton, Va., in the autumn of 1911. The preceding May he had developed what his parents called hallucinations, which occurred when he was alone only, for he would go errands and play about if he knew he was in sight of any one at all. There were no night terrors although he feared going to bed alone, and his mother and father always accompanied him upstairs. Whenever he was alone a spell would occur. The hallucinations were accompanied by a loud cry and a twisting backwards of the neck and contortion of the body. He was very rarely still, wriggling about nearly all the time in an excitable fashion. His father and maternal uncle are declared to have had similar attacks in childhood. But it could not be ascertained that the parents had not spoken of some of these before the boy. The mother was over-anxious, hysterical, and very uneasy when the boy was out of her sight, of which the boy was well aware.

Mechanism: Examination showed no physical signs of disease of the nervous or any other system. In anamnesis, I found him to be a very sensible little fellow and I ascertained that it was a snake which he usually saw, although sometimes a wild

beast would be seen. His shout was really the name of the animal he saw. He could not describe the snake except to say that its head was like an eel. He remembered well the first such occasion of fright; and the creature was not then a snake, but a rooster. He declared that he was never actually afraid of any animals. Indeed, on one occasion, wearing a red sweater, he chased a bull into the cellar to look for the bogey man. He said that his only fear was that of being whipped by his father when he was naughty, and that of this he was "not very frightened."

I could not in the short time at my disposal penetrate the psychogenesis completely. My question, however, soon showed that the hallucinations were not true ones; for when I asked the boy if when he looked around there was really an animal jumping on his shoulders, he had to reply "no," and that he never actually saw, felt or heard what he feared. He then spontaneously declared, "I reckon by imagination gets away with me."

Diagnosis and Prognosis: Familiarity with the mechanism of terrors of children enables one to interpret this boy's case as a phobia against being alone, produced by the foolish anxiety of his mother. This affective state was an induced one, therefore, produced by the idea of some "dreadful consequences" which might occur to a little boy when not protected by his elders. But the morbid reaction had become a habit, so that even though the initial cause were suppressed, training would be required to overcome the facile inductibility of the terrors. Inhibition of his undue impulsivity should also be undertaken.

Treatment: Accordingly the following procedures were outlined and the reason for them clearly explained to the boy and to his father. Firstly, he must gradually accustom himself to go out alone, first for half a block, then for a whole block, and finally around the corner. While doing this he could hold himself in hand, his atten-

tion fully awake to the need of manly behavior and the importance of recovering from his timidity. Secondly, he must learn to go to sleep without anyone else in the room, remembering what a nuisance a boy is who cannot forego keeping one of his parents constantly at home in the evening. Thirdly, he was shown exercises in slow movement and immobilization, by which he could suppress the wriggling tendencies of his limbs and body. His mother should be dealt with rationally, too. As a result, no further attacks have occurred.

Case 4.—Night terrors for ten years, caused by dreams due to hysterical jears induced in infancy. Cure by re-education based on explanation.

A girl of 16 was referred by Dr. L. Lichfield of Pittsburg, November, 1913, on account of great nervousness for years. had never been regularly to school until the fall, when she had been sent to boarding school after convalescing from an appendectomy, but had become so nervous that she had to return in two days. Inquiry showed that she would frequently wake in the night very much afraid unless she were soothed by someone sleeping with her so that she could never sleep alone. Further inquiries showed that a servant had told terrifying stories to her sister as a child; the horrors this brought ran through a family of three children, but they passed away from them all except this patient. She had been much indulged in between the ages of three and six, and had been somewhat spoiled since owing to a supposed weak heart, and had always been considered a weakly child. Her father and an aunt had been timorous as children; the latter for nine years had not dared to be alone for a moment.

Examination showed feeble reflexes becoming active on re-inforcement; muscle tone fair; weight 108 lbs.; pulse 104 during examination, although patient said she was not excited. Cardiac sounds closed; chest expansion free. Appetite is said to be good, with certain dislikes. Walking tires her

but dancing and tennis do not. For heteroforia she was prescribed glasses but does not use them.

Psychic functions are unimpaired except that she just wants someone with her when in bed. Her fears are either of fires or burglars and they only occur when in bed or asleep. She whines when dreaming and wakes frightened but never screams, but clutches her companion desperately for reassurance. She is sure she wants to get rid of this trouble. She cannot remember the first occasion of fear. Noises such as creaking of floors make her think there is someone in the house, although she knows positively there is not, but cannot make herself believe it. She is ashamed of the emotion and will go to bed alone although terrified if there is not someone else upstairs, but not unless, but will wait until mother comes unless they are there. imagines a burglar might hurt her, if pushed to it.

Analysis shows that there is no definite fear of what he might do to her, but that the fear is of the unknown, and although it might help her to know it, it might be too terrible. Her agitation upon speaking of this she attributes to her shame of being "babyish." I explain there is no shame in what one cannot help, but she cannot until an understanding is gained through analyzing the situation. She is not less frightened when away from home, but any person in the room will tranquilize her fear upon awaking if she can touch them. The night fear is quite different from any fears in the daytime.

After the analysis she was asked to go home and write out her impressions of the situation, which she did as follows:

"The earliest instance I can remember was about 8 years ago, when my nurse sat in the next room while I went to sleep. For 5 or 6 years afterward someone was with me when I was going to sleep. If I woke up in the middle of the night—which I usually did—I would be terrified and go

into mother's bed, with her, in the next room. It is within the last few months that she has been sleeping in the same room with me the entire night. Before that I always went to bed in the room next hers, but very rarely remained there all night. I cannot ever remember having the nurse put me to bed and then leaving me to go to sleep by myself. She was always in the next room. It made very little difference whether my mother, nurse or sister were with me. I preferred mother, but would have anyone rather than be alone. I was always worse in our city home than in our country home because I thought there would more likely be burglars in the city than way off in the country. I would go to sleep more quickly in the country but would always have someone with me.

"As long as I can remember I have dreaded night. I always awake a long time after going to bed fighting with my terror of burglars. Every sound made me think of them and I used to hold my ears shut so that I could not hear the floors creak and try to go to sleep that way. So when I thought of those long sleepless hours I would wish that there was no such thing as night!"

Her dread is mingled with self-contempt at her "silly babyishness." Three dreams were obtained. The first and second were of a burglar entering the window. The analysis showed only that the intruder aimed to shoot her sister who was standing up behind her; a dream of fears of elevators led to no pertinent associations.

As the dream analysis was so unfruitful, I believed it best to at once proceed to reconditioning of the psychological reactions. This was attempted in the first place by studying the child's power of understanding of what I gave her to read about the psychology of fear, and by making clear to her what she could not understand alone. In the second place she was given exercises in mental concentration, and as she became more proficient in these was urged to apply

them to the study of her own feelings of nocturnal apprehensions. The principle she was made to grasp was that fear and shame of her fears prevented her from facing and examining them, which was the essential preliminary to the understanding which would make them disappear. In ten days she returned home not yet able to sleep alone but beginning to obtain mastery. A month later her mother wrote me that she was entirely well and when she wakened in the night would quietly turn over and go to sleep without troubling anyone and was physically and mentally in better health than at any time in her life.

When any of these tendencies develop in a child, it requires the intervention of a physician skilled in nervous disorders, who can interpret what is known as the "psychological mechanism," which in plain language means that he can explain to parents and child why the child is nervous. When this is done, the rectification of the causes is very easy as the cases show.

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THE SIGNIFICANCE OF A DIFFER-ENTIAL BLOOD COUNT.*

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Long ages since, when plunged in the thickest night of ignorance and error, lay the world, save where in one small part called Greece there blazed the noonday sun of learning and art, destined to shed its beams unto all time. It was in this period of history that Hippocrates was numbered among the great torch-bearers of civilization. This medical genius of that ancient clime formulated a theory as to the causation of disease, which is the embryonic framework of the differential blood count. He, in his empiric but philosophic reasoning, supposed that the human body was composed of four different humors—blood, phlegm, black bile and yellow bile. And

that a disproportion in the normal percentages of one or more of these humors produced disease.

Working upon this hypothesis—that in disease there must be a disproportion in some of the elements of the body—Nasse, in 1835, sounded the keynote when he discovered and differentiated the white blood cells. Since the day of Nasse the classification of leucocytes has undergone many changes. The present most accepted method of classification divides them according to the shape of their nucleus, the presence or absence of granules in their protoplasm and the staining reaction of these granules.

Taking the form of nucleus as the basis of primal division, the leucocytes are divided into mono- and polynuclear. The mononuclears are divided into granular and nongranular and either of these divisions may take any one of the acid basic or neutral stains.

Accepting this form of nomenclature we have, in normal blood, of the mononuclear type:

Small lymphocytes......15-23% Large lymphocytes......7-11% Transitional cells2-8%

Then of the polynuclear variety:

Age produces quite a variation in these percentages. A child of one year has 30 per cent polynuclear neutrophiles and 56 per cent lymphocytes. At the age of 14 years they become as in an adult. They vary between these ages directly as to the age of the child. In children the eosinophiles are 1-4 per cent higher than in adults. So much for normal conditions.

In the interpretation of a blood count we have to associate the differential count, as the total count alone is of little value. In the early days of hæmatology undue prominence was accorded the total count, especially when it was high.

High leucocytosis does not always war-

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rant operative intervention nor does a leucopenia always signify a harmless condition. As a matter of fact, a typhoid or tubercular abscess may present no leucocytosis and conversely a small boil may produce a high total white cell count. But a leucocytosis is significant because of the fact that it is the index of body resistance, not of the severity of the infection.

Important as is the leucocyte count, the differential count is of greater importance. Instead of a leucocytosis, a leucopenia may exist, yet a gangrenous appendicitis be discovered at operation. In such a condition there would be a marked rise in the percentage of the polynuclear neutrophiles. Therefore, the relative increase in polynuclear neutrophiles is not only an index to body resistance but it also determines the degree of toxic absorption. For example, a total leucocytosis of 7,500 in a case of appendicitis with a polynuclear percentage of 90, calls for immediate operative interference. While conversely a total count of 15,000 with a relative polynuclear neutrophilia of 80 per cent would mean that the infection was mild and the resistance good. Of course, in making such interpretations the clinical history is of vast importance. The fever, however, is valueless as a guide in either diagnosis or prognosis in such conditions.

Despite its arbitrary basis, Gibson's chart gives excellent data in the border line cases. He observed that in cases of infection in which the resistance is good, the neutrophiles increased 1 per cent for every 1,000 leucocytes over 10,000. He also assumed that 75 per cent of polynuclear neutrophiles and 10,000 leucocytes to be the upper limit of normal. Now, if the polynuclear neutrophiles rise faster than 1 per cent to each 1,000 leucocytes, the infection is severe. If the polynuclear rise is less than 1 per cent to each 1,000 leucocytes, then the infection is mild and the resistance is good. Thus we have an index to the patient's resistance and to the severity of the infection.

Passing from the general rules of surgical diagnosis, we will consider some of the most important individual cases, one of the most important being appendicitis, which as an example, following the general rule, has been discussed. Practically all acute abscesses present the blood picture just described.

Puerperal sepsis may show no leucocytosis. Leucopenia may be present if the leucoblastic tissues are paralyzed by the infection.

When a mild infection occurs in a patient of good resistance there is usually a leucocytic reaction. The higher the leucocytosis the better the prognosis. In gonorrheal types the leucocytosis is low. In puerperal sepsis the red cells very often reveal the presence of a lethal agent in the blood when the leucocytes fail to give any suggestion of it. In this condition the leucoblastic tissues are paralyzed and the red cells are used to fight the invading germs. This is a compensatory process on the part of nature which is very expensive as it uses the red cells so fast. The development of sudden anemia after parturition is evidence of a puerperal sepsis. No other sepsis produces as marked an anemia so soon.

Syphilis presents a lymphocytosis as the chief hematological characteristic. There is also a marked secondary anemia. The severity of the infection may be gauged by the height of the lymphocytosis and the fall of hemoglobin. In very severe syphilis the polynuclears may be reduced to 25 per cent. The eosinophiles may be increased in tertiary bone or skin lesions.

Drugs affect the blood picture to a certain extent. The iodides, quinine, salicylic acid, antipyrine, nuclein, digitalis and morphine all cause a leucocytosis. Ether has quite a hemolytic action. More than half the total reduction of hemoglobin occurs the first hour, reaching the lowest in twenty-four. Then as a compensatory effort on the part of nature, the hematopoetic tissues become over-active and a polycythemia results. Da-

Costa advises that no serious operation be done when the hemoglobin is below 50 per cent, though successful operations have been done when the hemoglobin was as low as 15 per cent. A leucocytosis always follows etherization. This is transient, however, seldom persisting over 24 hours.

Chloroform also produces a leucocytosis, but it does not cause such a hemolysis. It does reduce the coagulating power of the blood thus exposing the patient to oozing or secondary hemorrhage.

In tuberculosis the blood picture is only changed as a result of complications such as secondary infection or hemorrhage. The injection of tuberculin causes a leucocytosis, a lymphocytosis and an eosinophilia.

Abdominal colic can often be differentiated into its various forms by the blood count. Lead colic has as a characteristic a basic degeneration of the red cells. Nephrolithiasis and cholilithiasis produce no change in the blood unless there is an accompanying infection. In intestinal colic there is a leucocytosis, while in intestinal obstruction there is a high leucocytosis.

Carcinoma and ulcer of the stomach sometimes are hard to differentiate. In carcinoma there is a leucocytosis, in ulcer there is none. In carcinoma there are normoblasts (nucleated red blood cells), in ulcer these are rare. In carcinoma the digestive leucocytosis is absent, in ulcer it is present. In carcinoma the hemoglobin gradually decreases, while in ulcer it falls suddenly after hemorrhage but regenerates quickly.

In pernicious anemia and malignant disease the blood picture is of value in diagnosis. In malignant disease the color index is below 1. In pernicious anemia it is high (above 1). In malignant disease the normoblasts are more numerous than megaloblasts, in pernicious anemia megaloblasts are more numerous. (Normoblasts are nucleated red cells of the ordinary size and megaloblasts are the same but very large.) Malignant disease presents a leucocytosis, pernicious anemia none or a leucopenia.

Malignant disease gives a polynuclear eosinophilia, and pernicious anemia a lymphocytosis

Malaria is easily diagnosed if the plasmodium is discovered, but in case it is not found a mononuclear leucocytosis with a low red count marks the picture.

Grippe does not present a typical blood picture, but there is, however, a characteristic leukemia. In complications such as otitis, there is a leucocytosis. So when there is a leucocytosis in grippe it means a complication. The only difference in the hematology of grippe and typhoid fever is the absence of the Widal in the one and the presence of it in the other.

In diseases of the heart where compensation is taking place there is a high polycythemia. This is an effort on the part of nature to further the process of compensation. This increase in red cells is higher in the congenital than in the acquired form.

Pleurisy with effusion is accompanied by a leucocytosis of moderate degree, while if the effusion is purulent the leucocytosis is high.

Chronic skin diseases produce an eosinophilia. Eczema has 45 per cent, urticaria 30 per cent, lupus 7-12 per cent, pemphigus 33 per cent, psoriasis 20 per cent, trichiniasis 20 per cent, and hydatids of the liver 60 per cent. These are always accompanied by a relatively high leucocytosis.

The prognosis of burns can often be determined by the blood count. The leucocytosis may run to 30,000 or 40,000 in a serious case and recover, but if it goes to 50,000 death is almost certain. The polycythemia is also very high, sometimes reaching 10,000,000.

Whooping cough in the catarrhal stage produces a high lymphocytosis. This may run to 80 per cent. Fully 90 per cent of the cases can be diagnosed by this sign taken with the cough.

Now, the diseases of the blood such as pernicious anemia or Hodgkin's disease cannot well be taken up in a paper as short as this. They belong to the specialist and any information concerning them can be secured from any text-book on hematology.

This paper does not present anything new on the subject, but is simply for the purpose of bringing out the simple things that can be done in hematology by the general practitioner. It is a plea for more scientific work and a more thorough investigation of our cases. It is our duty to our patients and to ourselves to make the science of medicine more practical and the practice of medicine more scientific. By so doing we enhance our power of diagnosis, prognosis and treatment, and are better enabled to study the profound and obscure pathology of disease.

If the general practitioner would, with his unlimited opportunity for observation and clinical investigation, he could throw many a beam into the deep shadows of the dark caverns of clinical mystery. We should not leave all the beauties of our profession to be enjoyed by our laboratory brothers, but should put forth greater effort to hasten the day when we could proclaim from the housetop that tuberculosis has been conquered and to go into the highways and hedges and herald the tidings that cancer is curable.

NEURASTHENIA: SYMPTOMS, DIAGNOSIS AND TREAT-MENT.

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This is a subject upon which much has been written and yet a wide and varied difference of opinion exists as to the exact meaning of the term neurasthenia.

Literally speaking, the term neurasthenia means without nerve strength and a neurasthenic patient is one presenting a group of symptoms indicative of fatigue, exhaustion, restlessness, and usually insomnia. Neurasthenia deals essentially with functional conditions. The word neuropathic, on the other hand, is applied to those fundamental

deficiencies and abberations of the nervous system which predispose it to disease or of themselves entail disease and degeneration. Neuropathy has its origin in basic morphologic and functional deviations and weaknesses and as might be supposed, it is largely hereditary and plays an important role in mental disease. The changes present in neuropathic states, as a rule, embrace the organism as a whole.

SYMPTOMS

The first fact that impresses us in neurasthenia is that the patient becomes readily exhausted, and that he is incapable of the sustained expenditure of energy.

Irritability: This is characterized by exaggerated response of stimuli from without, lessened inhibition, deficient innervation, and circulatory weakness.

Motor symptoms: Muscular weakness. The muscles rapidly become weak and signs of complete exhaustion and fatigue. Ask the patient to grip your hand and while at first it may seem strong enough it gradually grows weak. The patient will tell you that he cannot walk even a short distance without producing fatigue and that slight muscular exertion of any kind soon exhausts him, the knee jerk is quite commonly exaggerated. Irregularly recurring contractions of small bundles of muscular fibers are noticed, being especially marked in the face and extremities. Sometimes cramps of the muscles, as in the calves of the legs, will be complained of.

Sensory symptoms: This is entirely subjective. The patient complains of fatigue, aches and pains, usually referred to the trunk, limbs, or head, and these symptoms are brought on or made worse by exertion and subside with rest. Sometimes the patient complains of pressure or lightness of the head as dizziness. Insomnia is usually present, the patient complaining of being restless and wakeful during most of the night, either sleeping only for a while in the forepart of the night or early in the morning and during this wakeful period he becomes despondent.

Somatic symptoms: These are dependent upon deficient innervation, thus the digestive disturbances are primarily those of weakness and the patients complain of a fullness or sensation of weight, oppression and general discomfort in the epigastrium. They are usually constipated, presenting a tonic indigestion owing to the lack of flow of nervous energy to the glands and muscular coats of the intestines, thus retarding peristalsis.

Circulatory disturbances: Deficient innervation again becomes evident, we note coldness and in marked cases lividity of the extremities. We find modifications in the force and rhythm of the heart's action and in the character and frequency of the pulse. Palpitation of the heart is the most striking feature of the circulatory disturbances. Tachycardia is present in a great many cases. The circulatory phenomena are of great importance in relation to the mental condition of the patient; thus, fear is always accompanied by quickening of the pulse rate and usually palpitation of the heart, sudden pallor and other phenomena.

Psychic symptoms: This will be taken up in the treatment.

TREATMENT

This is divided into two groups. As to the class of patients who are closely bordering a complete exhaustion and those who are ready for an absolute isolation. In my own practice I have, each winter, a number of neurasthenic patients not actually suffering from neurasthenia who come to Florida to avoid staying indoors during winters and enabling them to spend their time in the sunshine and air. These people have to be treated, a great many times to suit some of their fancies; but with such thoroughness as to convince them that you are well acquainted with their particular case, enabling you to carry out your treatment minutely, for it is the details of the treatment that you are after. Absolute confidence of the patient is essential.

The patients requiring isolation rarely

you have to use personal tactics and adapt yourself to the patient in order to carry out the rest treatment that is so essential. Do not insist on asking too many questions, but simply advise a nurse and going to bed, then prescribe food. Begin with a moderate amount at first as the exhausted condition will not require a heavy diet. tatoes should be excluded at first and for a long time. Begin with milk, four to six ounces at mealtimes and just before the hour for sleep. Give some solid food, most any of the vegetables, such as squash, spinach, stewed celery, and later string beans and peas, until the full diet is reached. Eggs are given in quantities to as many as eighteen each day. The milk is gradually increased. Wheat bread should be entirely excluded. Upon each visit become more acquainted with your patient, allow her to talk freely of her troubles and be an attentive listener, and soon she will tell her nurse (for male patients always a male nurse and for females vice versa) that she would like to talk more to the doctor; the nurse, previously instructed, will find something to take her out of the room soon after your appearance. Then the time is at hand. She will say, "Doctor, I have been wanting to talk to you for some time. I want to tell you about my affairs." This marks the first step in the improvement in her condition. They express delight in the details of their symptoms and especially those that have sexual disturbances, they want you to explain the cause and will watch you as a critic; and here depends largely your success in treatment. If satisfied with your version they bid you a warm good-bye and tell you they expect you again tomorrow and you will do well to observe punctuality in calling. Never talk about other patients to them. Remember to keep your patient in bed. Do not let her move out of bed except to empty the bowels and bladder. Forbid correspondence and all mental exertion as the patient not only requires physical but

come to us here, but when you do have one

complete mental rest. Full feeding, gentle bathing and massages by the attending nurse only. Relatives and friends should be kept out of the room. Medicines are to be given conforming with the different views of the physician. Usually, some mild purgative and tonic at the discretion of the physician. A large number of our neurasthenics are surgical patients, and a large proportion of them are women.

In conclusion, I will say that the progress of the treatment is varied, the pallor disappears, then the lividity. Crying spells are soon over and of shorter duration, and fear subsides. The patient sleeps better and wakes better rested, is more talkative, more concerned with their environment, and digestion is better. They are as a rule concerned about their eyes being so yellow and feeling bilious. When you tell them that the eggs produce these symptoms they at once form a dislike for eggs. This is only favorable. They learn to appreciate you more as you become their confidant.

In writing this paper I have read text books frequently and using my own personal experience as a frame for the paper. I realize that there are other physicians present who have had a far greater experience with neurasthenia.

SCIATIC NEURITIS—ANALYSIS OF A TYPICAL CASE.

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The patient in this case was a cabman forty years of age. He complained of pain down the back of his right thigh, extending into the calf and dorsum of the foot. The pain came on rather suddenly several days prior to examination, and is continuous, though punctured by exacerbations of lancinating, burning nature. Between paroxysms the pain is dull; and there is a feeling of heaviness and coldness about the affected limb.

The personal history of the patient con-

tained nothing interesting except a rheumatoid diathesis. Moreover, the family history was negative.

Neurological examination revealed the following facts: (1) tenderness over the course of the sciatic nerve, with accentuated points at the middle of the hip, middle of the thigh, external popliteal region, a point behind the external maleolus, and dorsum of the foot; (2) loss of the tendo Achilles reflex; (3) sharp pain in the sciatic nerve when the leg is extended and the thigh suddenly flexed upon the trunk; and curvature of the lumbar spine towards the affected side.

The case was classified as sciatic neuritis, due to cold and pressure upon the nerve from prolonged sitting upon a hard seat; and treatment as follows was prescribed: (1) rest in bed for several weeks; (2) a Thomas splint from armpit to ankle; (3) galvanic electricity daily with the positive electrode over the tender nerve; (4) hot applications alternating with ice-bags to the back of the thigh; (5) counter-irritation over the nerve trunk twice weekly with a Panqulin cautery; (6) free purgation once a week with calomel and salines; and (7) the following prescription:

R Aspirin 5j.
Phenacetin 5ss.
Donoin gr. vi.
M. Ft. Chartulæ No. xii.
Signa: One powder every three hours for pain if necessary.

Etiology. Sciatic neuritis is what is usually meant by "sciatica." Pure sciatica, that is, neuralgia of the sciatic nerve, is comparatively rare.

Sciatic neuritis is much more common in men than in women, and is essentially a disease of adult life, cases before the age of twenty-one being rare indeed. The usual age for the incidence of this affection is between thirty and fifty. The disease is more common in cold weather, fall and winter, than during the warmer seasons, and is favored by those occupations which involve exposure and muscular strain.

Constitutional causes which appear to be

operative include rheumatoid and neurotic diatheses, diabetes, syphilis, phthisis, and cachexias of all kinds. Special causes are cold, as from sitting on cold, wet ground, or from wearing wet clothes; pressure from sitting upon hard surfaces, from tumors, from constipation, from parturition or the gravid uterus, and so on; and spreading inflammatory processes from the pelvis or corda equina. Also affections of the lower portion of the spinal cord and vertebræ may act as causes of sciatic neuritis, as may injuries to the nerve itself or to the sacral plexus.

Pathology. The nerve trunk is thickened and edematous. A perineuritis, or interstitial neuritis exists accompanied by exudation within the sheath of the nerve. Only about a dozen autopsies have thus far been made. But at these considerable engorgement of the blood vessels in and around the nerve was found present.

Symptoms. The neuritis develops rapidly and the primary symptom of pain in the sciatic nerve and frequently its distribution, comes on somewhat suddenly. With the appearance of the pain, tenderness and hyperesthesia are found over the sciatic territory. If the reflexes be examined no abnormality will usually be met with except absence of the heel-kick, and possibly exaggeration of the plantar and cremasteric reflex. A characteristic gait is customary; for the patient tilts the pelvis towards the unaffected side in an effort to throw most of the weight upon the sound leg. This results in a lateral curvature of the spine, called sciatic scoliosis, with the lumbar convexity towards the affected side, and possibly a dorsal compensatory curvature towards the opposite side—an exactly contrary scoliosis to that seen in neuritis of the anterior crural nerve. In advanced severe cases the pain and tenderness may partially subside leaving some anesthesia and atrophy of the gluteal and posterior femoral muscles. When atrophy occurs, a varying degree of R. D., will be encountered

together with diminished or lost response to faradism.

During the early stage when the pain is most intense, the patient lies characteristically with legs flexed and feet extended. Any attempt at walking or moving the limbs either actively or passively may precipitate excruciating paroxysms of pain.

One diagnostic sign is to extend the leg and suddenly flex the whole extended extremity upon the abdomen at the hip, noting the effect of this stretching of the sciatic nerve over the neck of the femur. If this causes acute pain in the nerve, the sign is present and said to be pathogmonic. Gowers mentions a similar sign of pain in the nerve brought out by pressing firmly behind the knee-joint when the leg is a little more than half extended.

Usually there are certain tender spots along the course of the nerve, which are characteristic. One is over the sciatic notch at the middle of the gluteal region, another is over the middle of the back of the thigh, a third behind the knee, particularly over the external popliteal nerve; while a fourth is behind the external maleolus and a fifth on the outer dorsal portion of the foot. Rarely a herpetic eruption appears at points over the course of the nerve.

Treatment. A prerequisite in the management of sciatica is rest. To insure a maximum of this the patient should be put in bed, and a Thomas splint, consisting of a board from the axilla to and beyond the ankle, should be applied. Galvanism lasting a few minutes once or twice daily with the positive electrode over the tender nerve is helpful. Likewise, other and more active forms of counter-irritation in the early stage of the neuritis. Sinapsims, or better, the Paugulin cautery to the point of vivid redness may be used on alternate days with good results. Occasionally the high-frequency current or the static spark works like magic in relieving the sciatic pain; unfortunately this is not true in a large per cent of cases. Cold applications, ice-bags

for example, are useful adjuncts in relieving the pain, as are the various counterirritant ointments dispensed in compressible tubes—methyl salvicylate ointment, "baume analgesique," and so forth.

More heroic measures include (1) the making of firm pressure by the physician with his thumbs upon the painful spots of the nerve for thirty seconds at intervals of twenty minutes until three or four pressures have been made, repeating the series daily or oftener if feasible; (2) puncture of the sheath of the nerve at several points for the purpose of evacuating the exudate from the sheath; (3) injections of ether, alcohol, or hot water in or near the nerve trunk; (4) stretching the nerve, in stubborn cases, and (5) dissection of the fibrous enlargement of the nerve, or even resection of the nerve itself, as a measure of last resort.

As is the case in other forms of neuritis, the selection of pain-relieving agents for internal administration is a matter of grave responsibility because of the habituation danger. Oftentimes morphine is the only agent which will make life endurable for the patient, but its use should be postponed as long as possible and should be disguised when finally resorted to. A good method of disguising its use is to administer Magendie's solution, five to ten minims, as often as necessary instead of the hypodermic "shots." Acetphenetidin, acetyl salicylic acid (aspirin), donoin (a morphine derivative easily soluble in water), and injections of two to four per cent solution of cocain at painful points are analgesics which may be tried and alternated. The writer has found daily injections of quinine and urea hydrochloride solution along the inflamed nerve, as furnished by the pharmaceutical manufacturers in sterile ampules, a most satisfactory measure for the relief of pain; and in cases with a malarial background curative aid may be expected from this medication.

In late cases vigorous massage of the gluteal, posterior femoral, and calf muscles

should be carried out systematically once or twice a day. Also faradism, and passive movements. Hot and cold douches, Turkish baths, and alcohol rubs are serviceable too; and these hydrotherapeutic measures should be accompanied by tonic doses of strychnine to aid in restoring tone and strength to the impoverished muscles.

Prognosis. Ultimate recovery is the rule in sciatica, though occasionally cases seem to hold on indefinitely despite every remedial effort. The average duration of the disease is two to three months, though many cases run six months or a year or more. The atrophy of muscles usually disappears with recovery and with it the spinal curvatures. The degree of response to faradic electricity is an index to the severity and probable length of the case.

603 Candler Building.

INAUGURAL ADDRESS.*

L. S. Oppenheimer, M. D., Tampa, Fla.

Gentlemen:

You have instituted an innovation by importuning the newly-elected president to deliver a formal address. This shall be the entering wedge that will signalize my entire incumbency. I shall introduce a number of innovations, several of them vital ones. Strong, aggressive initiative is needed here to get you into line. I will give you a good imitation of one.

When the history of this society shall have been recorded, the vicious fact will stand out boldly that the prominent spirit that has been dominating its existence, its work, has been a constant tendency to run off the track, to forget its true purposes, to find the mote in the brother's eye and to knock it out with some home-made hyperethics, to meddle with outside affairs, to let the other fellow do the work, write the papers, discuss them, build up the society,

^{*}Address delivered before the Hillsborough County Medical Society at Tampa, December 21, 1915.

or to stay away entirely, or to exploit odoriferous personalities behind the shield of so-called ethics, instead of confining ourselves more to the real, practical, beneficial purposes of a society of physicians.

Let these extraneous matters be relegated to the place which the by-laws have provided for them. Let this society live up to its laws or repudiate them. I would have you to understand from this that there are some on our books for which I have a positive contempt. These are conspicuous for their narrowness, and lack of confidence in the decency and dignity of our members, and in the efficacy of our national code of ethics. Other good laws are being daily violated, as you are aware, by some of our best members—perhaps I, too, have not been wholly guiltless. This laxity tends to destroy much of the usefulness and strength of this society. It must be corrected at once. Let the violators be admonished firmly, unmistakably. An offence is the more glaring, the more reprehensible, the greater the prominence of the offender. Leaders should not mislead.

As for myself, if you will bear with me and concede to me a reasonable share of the wisdom which long years of observation and much bitter experience ought to bring the average man, and permit me to guide this society as an old man leads a stronger, wide-awake, younger one, I will endeavor to avoid the breakers and shoals, and lead you to my Utopia, where you will do your duty to this society, to this wonderful city of Tampa, and to yourselves.

This society possesses as great an amount of medical and surgical ability as any in the state, and it should be the aim of every member to impress this fact upon the profession of the state, and to prepare himself to make it a representative body of up-to-date medical men, and press Tampa's claims to being a medical and surgical center. More specializing should be encouraged. Several fields are still unrepresented.

Let us have papers at every meeting that

are fit to send abroad. Let discussions be full and free, but to the point; desultory talk will not be countenanced. These things can only be acquired through harmonious, united, persistent work on the part of the entire body politic. Individual, isolated effort is fruitless.

Let this floor be devoted to remunerative labor, and let the ethical, personal, political questions be threshed out before committees; and, for goodness' sake! let the personalities be fought out in the back yard, behind the woodshed. I believe in war, and fight; they are the great crucibles for civilization, purification; they will never, and ought never to be abandoned; but, gentlemen, please do not select the parlor for your prize ring. Neither let this society be deprived of your talents because of your personal grievances.

And now I have a special lesson to impart to you younger men, which I wish so to impress on the tablets of your memory that it shall never be effaced. It will be a brief but vivid retrospection, a rare, instructive history, a powerful argument; and the Ego will be the prominent figure. I shall handle the subject without gloves, without varnish, without rancor, without resentment, without unkindness, and without fear.

To present my argument, I must remind some of you that once upon a time you were my implacable foes. But in all these years I have labored to regain your love and esteem. At last you have most generously bestowed them on me. To impress this lesson on the younger generation I desire to express myself unrestrainedly, for which I crave the kind indulgence of these erstwhile enemies, whom I would not dare offend.

About eighteen years ago a handful of us organized this society. Dr. J. A. Abernathy was elected president, and I secretary and treasurer. Only six of us are left.

I cannot recall through what influences I received the appointments of surgeon to

the various public utility corporations, but it seemed that my name appeared in the newspapers in connection with accidents too frequently. Now, to be candid, I enjoyed this free advertising, this notoriety. Of course, I was the only member of the society who did. And so, advertently or inadvertently, I spoke to the ubiquitous reporters and occasionally asked them not to publish my remarks but hoping they would, against my consent. Of course, none of you were ever guilty of doing such an unethical act. Hence, I was hauled over the coals a number of times, rarely justly. Indeed, there appeared to be a tendency to find fault with all my acts. It seemed to me that the animus which caused these attacks was inspired by envy, jealousy, suspicion, inability to account for my rapid advancement in practice and position except by unethical methods. I resigned.

Some time after I accepted a contract offered me by the Centro-Español which I held four years. During that time the Hillsborough County Medical Society boycotted me, hounded me, ostracized me, sought to crush me; many of the members humiliated me, attempted to destroy my standing in the community. As one truly said a week ago, "You were a professional outcast."

Notwithstanding all this militancy, I was steadily gaining a lucrative practice. But what comfort is wealth to a sick heart, to a proud man whose reputation is at stake, whose professional co-workers, the best men of the community, shun him, hate him?

"He who steals my purse steals trash, "Twas mine, 'tis his, and has been slave to thousands;

But he who filches from me my good name

Steals that which not enriches him, But makes me poor indeed."

Gentlemen, I believe all of us are directly responsible for our misfortunes. Indiscretion may not be a crime, but it will invite retribution. My own blunders, ambitions,

lack of judgment, brought all this contumely upon my head. There is no such power as blind fate. Man is the architect of his own fortunes. I have no patience with the pessimist who affirms: "There is a divinity that shapes our ends, rough hew them how we may." On the contrary, "There is a tide in the affairs of men, which taken at its flood leads on to fortune." I have long ago concluded that success is the recognition of an opportunity with the ability to take advantage of it.

One bright, glorious reminiscence stands out beautifully, cheeringly, on the canvas of the past; that is the picture of one courageous man in this society who held me by the hand in those troublous times and said: "Oppenheimer, I believe in your honesty and sincerity of purpose. I am your friend and shall always be." This lion-hearted Scotchman was threatened with suspension for assisting or consulting with me; but he defied the society. He has never deserted me. In him are embodied the tender heart of a woman with the courage of a hundred lions. He fears no man. All who know him recognize him as the grandest, noblest character in the medical profession of this city-Dr. John W. Douglas. I love him for his true worth; and the honor you have bestowed upon me, which is a vindication of his abiding faith in me, brings to my heart a solace which I cannot express.

In time I saw my error, the humiliating position of a physician practicing for a society where the rich pay the same charity fees as the poor. I was ashamed of it, and I got out of it.

I then registered a vow to redeem the confidence and respect of my peers, to make public applause and flattery secondary to that.

Now, I possess neither brilliancy in any field, nor talents, nor gifts; but I am blessed with a keen sense of honor and justice, a self-sacrificing spirit, and a deep and abiding love and charity for my fellow man.

I have willingly made great financial sac-

rifices, as you know, to maintain my own self-respect and yours; have aimed to impersonate lofty ideals; have ever looked upward for greater attainments, even though I fell far below the mark.

"Who aims below the stars aims too low."

To be able to win over a body of powerful, intellectual men, who had combined at one time to trample you cruelly, mercilessly under their feet; to win their respect and love and make them create you their chief and leader, and give you the warm, firm hand-clasp of sincere confidence; this is a consummation vouchsafed to but few men. It is the reward of years of unflinching efforts to be true to high ideals.

In the past I was chosen, as all of you know, as the head and leader of many greater institutions than this, but this honor is the crowning victory of my life; the future holds nothing in store for me that can ever equal it. It is an epoch in my history, and I shall endeavor to make it equally so in that of this society.

And now, my sons, mark the lesson! There is not a single one among you that cannot attain this elevation if you but wisely apply yourself and labor for it. Take heart, keep your head, be steadfast, let neither foe nor friend swerve you from the line of duty, nor hurt you overmuch!

IF-

"If you can keep your head when all about you

Are losing theirs and blaming it on you;
If you can trust yourself when all men
doubt you,

But make allowance for their doubting too:

If you can wait and not be tired by waiting, Or being lied about don't deal in lies,

Or being hated don't give yourself to hating,

And yet don't look too good, nor talk too wise;

If you can dream—and not make dreams your master:

If you can think—and not make thoughts your aim;

If you can meet with Triumph and Disaster, And treat these two imposters just the same:

If you can bear to hear the truth you've spoken

Twisted by knazes to make a trap for fools,

Or watch the things you gave your life to broken,

And stoop and build them up again with worn-out tools;

If you can talk with crowds and keep your virtue,

Or walk with kings—nor lose the common touch;

If neither foes nor loving friends can hurt you;

If all men count with you, but none too much;

If you can fill the unforgiving minute

With sixty seconds worth of distance run, Yours is the Earth—and everything that's in it—

And—which is more—you'll be a man, my son!"

—RUDYARD KIPLING.

SOME REMARKS ON ALCOHOLIC GASTRITIS.

George M. Niles, M. D., Gastroenterologist to the Georgia Baptist Hospital, Atlanta Clinic, Etc., Atlanta, Ga.

In considering alcoholic gastritis, which markedly differs in many respects from other gastritis, the writer desires to call attention not only to its peculiar clinical features, but also to the proper treatment so dissimilar from that indicated in other forms of stomach irritation.

Alcoholic gastritis is generally brought on by indulgence in alcoholic debauches, and is specially prone to appear when cheaper brands or less diluted forms of whiskey are consumed. In many instances, where the desired stimulant cannot be obtained, the maddened inebriate will drink pure alcohol, Jamaica ginger, cologne spirits or some other of the "bitters" which are known to hold a large alcoholic content.

"Steady drinkers" seldom present the acute form, though the gastrologist will occasionally see individuals in apparently good health, with the exception of dyspepsia, whose discomfort will quickly disappear with the cessation of all alcoholic beverages.

The effect of alcohol upon the gastric mucosa is that of an irritant, producing vasomotor dilation; and, if kept up long enough, decided congestion of the part. The appetite is deranged, simple and sane foods fail to please, and there develops a craving for those that are acid, fiery or even irritating. Through the dulling effect of alcohol upon the sensorium, there is a loss of appreciation of the more delicate shades of appetite, as well as the sense of satiety; hence the appetite loses its physiologic monitor, with consequent injury to the digestive machinery.

Furthermore, in the alcoholic subject there is generally present an hepatic hyperemia, contributing to already existing gastric congestion; and through the resulting imperfect activity in various other organs, there is laid a heavier burden upon the function and structure of the stomach. Thus we may observe cardiac excitement, respiratory deficiency, faulty elimination, and imperfect metabolism—all in one seeming pathologic conspiracy to harass the already inflamed gastric mucosa.

At this stage nervous upsets appear, and sometimes it is hard to decide whether certain manifestations are gastric, toxic or nervous.

Perhaps the most destressing symptom is the nausea and vomiting, appearing soon after meals and depending to an extent upon what is eaten. This nausea is less when liquid or bland articles are taken, but these are not craved, in fact there may be a repugnance for all food. Often during a debauch no food is eaten for several days and the patient finds that while undiluted whiskey hurts him more, it is more easily retained. Another charasteristic symptom is the "morning sickness," which seems relieved only by whiskey. Thus the wretched victim is constantly impelled to drink that which injures him most, and keeps alive the fire of gastric distress.

The test-meal discloses no special information, and occasionally fairly normal test-meals may be obtained from alcoholic patients in whom severe clinical symptoms are manifest. Long continued cases, however, with many exacerbations, may result in complete achylia. Achylia, too, is generally present when the liver is cirrhosed.

Treatment. The outlook naturally depends upon the patient's habits and whether there abides in him either a spirit of cooperation or a reasonable amount of will power. If by his aid or by the restraining influences of a hospital complete abstention from all forms of alcoholic intoxicants may be secured, the prospects for recovery are bright, although the deeper pathologic changes may persist.

In some cases it seems almost impossible to suspend the stimulant at once, though this is always thereotically indicated. Under such conditions the following prescription, given in but little water, will noticeably relieve the craving for whiskey:

R Tr. Capsici.

Tr. Condurango aa 5iv.

Tr. Gentianae Co 5i.

Sig: One teaspoonful in water every one to three hours.

Should there be threatened delirium tremens with occasional spasmodic twitching of the muscles, the hypodermic use of 1-50 grain of apormorphia every two or three hours will bring both quiet and relaxation. This should not be continued if nausea is increased. For the nervousness and tremor this will prove helpful:

R Conc. Tinc. Passifloræ Incarnatæ. Elix. Anmoniæ Valerianatis aa 5i. Sig: One teaspoonful in water every one or

If the nausea persists, this will aid:

R Spts. Amygdalæ amare 5ii.
 Resorcinolis gr. x.
 Lac. magnesiæ q. s. ad. 5iii.
 Sig: One teaspoonful every two hours.

The element of toxity must be dealt with, therefore purgatives and diaphoretics should form a part of the early treatment almost without exception.

The diet should be bland and liquid at first, though if the food is retained with difficulty, hot soups or ovster stew, to which is added plenty of black pepper, will more probably be kept. It appears that these overstimulated stomachs require highly seasoned foods to awaken the flow of necessary juices, and alcoholic habitues have often learned this fact by experience. Hot broiled beefsteak, well seasoned, is also indicated just as soon as possible; also soft boiled or poached eggs well peppered. This regimen of stimulating dietetics is indicated in alcoholic gastritis alone, for conditions are radically different from the other forms of gastritis.

The unirritating hypnotics may be required for a brief period, but should be promptly discontinued upon convalescence, or another pernicious habit may be formed.

In addition, all the forces of psychotherapy should be brought into play, in order that a weakened will power may assert itself, that complete and lasting abstension from alcoholic drinks may be achieved, and with bodily and nervous strength may also be gained digestive peace and health.

922 Candler Building.

KIDNEY DISORDERS OF CHILD-HOOD.*

J. H. Fellows, M. D., Pensacola, Fla.

All I can hope to cover of this subject is a brief discussion of the more common dis-

orders of the kidney in children. The examination of every patient should not be considered finished until a fairly complete and thorough examination of the urine has been made, and by this I do not mean urinalysis as we sometimes allow ourselves to become accustomed to making in the office, because in such examinations the essential facts are not revealed. A complete examination should include the specific gravity, reaction, examination for albumin, glucose, acetons, diacetic acid indican, a test for bile and a microscopical examination of the sediments.

A specimen in an infant is not always an easy matter to get, a bottle with adhesive tape in the male and absorbent cotton or a cup in the female will usually suffice.

PYELITIS

Pyelitis is probably the most common disease of the kidney in infancy. I think it would be found to clear up many obscure diagnoses if the urine was examined as a routine procedure. In the past week I examined the urine of an infant and explained a temperature which the mother thought to be due to teething. Pyelitis may occur alone or with other diseases as cystitis, nephritis, etc. It is an inflammation of the mucous membrane of the pelvis of the kidney and is more common in girls than boys. A few leucocytes in the urine of an infant should surely make one suspicious of this condition.

Helmholtz says it is important to collect several specimens on successive days because in chronic cases there is an absence of pus for several days followed by a sudden gush of pus.

The colon bacillus is, according to Hymen, the most common organism, the infection may be ascending, descending or transparietal.

Pyelitis is characterized by a high remitting temperature, but may give rise to but little temperature. In my cases the temperature has ranged from 99 to 102. Urotropin beginning with small doses and gradually increasing to larger doses has

^{*}Read before the Escambia County Medical Society at Pensacola, December 14, 1915.

given me very good results. Wood of North Carolina claims excellent results from potassium citrate.

ACUTE NEPHRITIS

Acute nephritis probably comes next to pyelitis in the disorders of the kidney in children. It is most frequently seen following the acute infections, it may be primary or secondary, primary infections being less frequent than the secondary ones. The cause of the primary type is thought to be some infection the exact nature of which being in some cases impossible to determine (Holt). The secondary infections are most often seen following the acute infections such as scarlet fever, diphtheria, etc., the toxins acting as an irritant to the kidney structure, the whole organ is usually involved. The urinalysis will always show casts, usually albumin, renal epithelium and blood are sometimes present.

We should always be on our guard in the latter part of any acute infection and make frequent and repeated examinations of the urine, otherwise acute nephritis may creep in and claim our patient. We should never wait for edema as this may occur late or sometimes not at all. There may be no symptoms other than the temperature and the urinary findings.

Recently I saw a child five years of age that had a nephritis following diphtheria. The diphtheria had been diagnosed but the nephritis had been overlooked simply because the urine had not been examined. So I repeat that we must constantly be on our guard and make frequent examinations of the urine.

CHRONIC NEPHRITIS

Chronic nephritis is almost unknown in infants except as it occurs with congenital hydronephrosis (Holt). While infrequent in children it does occur. I have had three cases in the past three years, in children 5, 7 and 12 years respectively. The patient of seven came with a history of having had headaches for three years, these headaches were often accompanied with vomiting with-

out nausea often occurring at night. There was no specific history, no previous illness. Child was anemic, poorly nourished and had a typical pigeon breast and undoubtedly had had rickets. Urine showed hyaline and granular casts and traces of albumin. Patient was passing about two liters of urine daily. Under prolonged careful diet and removing the child to the country recovery seems to have been complete.

The other two cases are still under observation. The one of five has hookworms, for which he is receiving treatment.

DIABETES

Diabetes is not very common yet not rare, about seven hundred cases having been reported. One in an infant four months of age (Orliff). However, it is rarely seen under one year.

The ætiology is still confined to theories. The prognosis is to be guarded.

X-RAY THERAPEUTICS.*

E. T. CAMPBELL, M. D., Starke, Fla.

The impression prevails, not only with the laity but to some extent with the profession, that the sole value of the X-ray is for radiographic purposes.

In this paper, therefore, I will not dwell on its inestimable value as a discoverer of hidden secrets but as a healing agent.

To fully cover the ground would require not pages but volumes, so I will be as brief as possible and yet try to give you some faint idea of the vast possibilities in this field.

The first to notice or to report the notice of the production of an erythema, and following the erythema, the destruction of the hair follicles, and to recommend its use in the treatment of hypertrichosis, was Freund in 1897, and following him Schiff, Benedicth, Walsh and many others. Freund suggests its use in lupus but the first report of success in the United States was by P.

^{*}Read before the Bradford County Medical Society, April 1, 1915.

M. Jones of California in January, 1900, next by Knox in November of the same year and in December, 1900, Pusey of Chicago reported 34 successful cases.

The success in the different forms of lupus encouraged operators to extend their field of operations, and then came many successes in alopecia areata by Kimbok and Holzkneckt, tinea tonsurans and favus by Schiff and Freund, Kimkok, Torek and many others.

Following successes in the above-mentioned skin diseases, it was next used in epithelioma, sarcoma, carcinoma and benign tumors with flattering successes and many disappointments, but when we observe that the treatment of all forms of disease by all methods of procedure are accompanied by disappointments, we must concede the fact that the X-ray has entered the field to remain.

Inoperable cases of carcinoma and sarcoma referred by the surgeon to the X-ray operator have made some wonderful recoveries.

In using the X-ray in treating cancer, it was noticed that the pain was invariably relieved and because of this virtue it was recommended and used in various forms of rheumatism and neuralgias.

After this brief review of the early history of the use of the X-ray I will report a few cases which have come under my own observation.

I began the use of the X-ray in 1901 when there were no books published on the subject and our information came from articles published in the various journals and by experience, often costly.

One of my first cases was an epithelioma of the eyelid which healed rapidly and without scar, then followed many more with few failures. In lupus vulgaris, and lupus erythematosa our greatest successes have been attained.

Mr. J. J., of Kansas, came to me in 1904 with lupus vulgaris of the nose and cheek which he had had for eight years and had

been treated a number of times without results. Three weeks treatment healed the ulcers successfully and a letter received from him last year informs me that he has had no return.

Deep-seated carcinoma is conceded to be the least amenable to the X-ray, so I wish to report a case of carcinoma of the breast. Mrs. M. C., of Missouri, came to me in 1902 with a hard nodular tumor of the left breast, the size of a door-knob, and three smaller ones in the left axilla, one the size of a walnut and the other two the size of hickory nuts, all hard and nodular.

I used the X-ray daily for two months; the tumors lost their nodular character and became soft and the pains ceased. When she left the sanatorium the tumors had not disappeared though I felt that their malignancy was destroyed. A few months ago I received a letter from Mrs. C., (twelve years later), saying she had had no further trouble with her breast.

Miss R. McG., of Iowa, came to me for treatment for multiple adenoids of the breasts. She had been under Dr. Murphy of Chicago. After six weeks' treatment with the X-ray all signs of the trouble disappeared.

Miss M., of St. Charles, Mo., came to the sanatorium in 1902 with the worst case of acne vulgaris I ever saw; her face was simply a mass of boils. I used all the remedies recommended but to no avail. I then used the X-ray for two weeks and the inflammation all disappeared and when the erythema disappeared, her face was as smooth as velvet, but there were a number of pits from the enormous pimples that had punished her so long.

Mr. L., of Missouri, came to me in 1903 with a rodent ulcer which had destroyed the skin and outer plate of the temporal bone over the superciliary ridge on the left side, had eaten into the frontal sinus and had attacked the inner plate of the temporal bone. It affected all of the left side and about half of the right side. After

two months' treatment the ulcer had healed perfectly and new skin had formed in the bed of the ulcer.

Mr. A. C., of Missouri, had suffered all winter from sciatica. In March, 1902, he came to the sanatorium on crutches. . Having so often observed the ability of the X-ray to relieve the pain incident to cancerous growths, I resolved to try it in his case. I helped him upon the table and gave him fifteen minutes' exposure from a hard tube. He got down from the table without assistance, twisted himself about on first one leg and then the other, remarking, "Why, that don't hurt at all." He then walked home, several blocks, carrying his crutches under his arm. That night the pain returned and next day he returned using one crutch only. I again used the light with similar results as the day before. The second night the pain returned again but not so severe, and after the third application there was no return. I continued treatment for two weeks and when I last heard from him there had been no return of the sciatica.

Since coming to Starke I have had several cases, two of which I will report.

Mrs. P., came to Florida from Pennsylvania three years ago on account of sciatica which troubled her every winter. With considerable difficulty and assistance she came to my office and I gave her a fifteenminute exposure. The pain was relieved and she walked home without assistance. I gave her treatment for two weeks and to the present time she had had no return.

Mr. J. R. D., came to Florida from North Carolina on account of sciatica. His case was more stubborn, but after each treatment he felt relieved and could notice improvement from day to day. I gave him seventeen treatments and to date, two years since treatment, he has had no return.

I have treated a number of ladies for hypertrichosis with the most happy results. In one or two instances there has been a return of the growth but a second course of treatment was effective.

I have only mentioned a few cases here, and these to show the possibilities which lie before us in the application of this most valuable agent for the cure of disease, and trust I have not wearied you in reciting them.

In closing, I wish to touch on the burn which sometimes results from too long an exposure. In two instances cancer has resulted from the effects of the burn and the press of the country has heralded it far and wide and have succeeded in creating a fear of the light. I will venture to say that every X-ray operator has had one or more cases of burn and yet from the thousands of cases of burns, only two have resulted in cancer.

Cancer has been produced by burns from fire, but millions of cases of burns by fire have not resulted in cancer.

Cancer has been caused oftimes by traumatism; but millions of cases of traumatism have not resulted in cancer.

Therefore, until we know more of the cause of cancer, we cannot say that because a cancer occurs in the seat of a burn or traumatism that the burn or traumatism is the cause of the cancer.

This is indeed an age of wonders, and each year some mystery is made to disgorge its secret and if we can but live long enough we shall see many of our troubles solved for us.

A CASE OF ABSENCE OF VAGINA AND UTERUS.*

E. W. WARREN, M. D., Palatka, Fla.

Miss P., aged 20, had never menstruated. For the past five or six years her mother had called on me at irregular intervals for prescriptions to start her menstruating. The girl was never willing to submit to an examination. On October 15th when I re-

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

fused to prescribe any further without an examination, she consented.

Family history negative. Patient was well developed physically, labia and clitoris normal. Hair on mons veneris normal. Pelvis broad and typical of female. Mammary glands, nipples and areola developed normally. On separating labia a faint line indicating a vestigial hymen was apparent, but no opening. On pressure it was solid where the vulval orifice should have been.

Under ether administered by Dr. J. C. Chandler, I made an opening inside the faint line indicating the hymen and using the scalpel and blunt dissector made the opening larger and extended gradually backwards and well up under arch of the pubis. After a most thorough examination no evidence of even a vistigial vagina was found. The opening was continued back well into the sacral region in search of a uterus but this organ was also absent. The rectum lay rather well up under the pubic arch. A rather large laceration in the rectum was unexpectedly made directly posterior to the pubes which healed readily. The ovaries were present but where the vagina and uterus should have been was perfectly solid. She has vicarious menstruation in an irregular sort of way by nose bleed and spitting up blood at times.

PROPAGANDA FOR REFORM.

Protonuclein and Protonuclein Beta. —Eight years ago, the Council on Pharmacy and Chemistry published a painstaking and exhaustive report on Protonuclein and other products of Reed and Carnrick. This report showed conclusively that the whole theory of nuclein therapy was a tissue of speculation, into whose texture are woven only a few slender threads of fact. Now the Council reaffirms its former action with regard to Protonuclein. The objections to Protonuclein apply with equal force to Protonuclein Beta, said to be Protonuclein mixed with equal amounts of nucleoplasm and protoplasm of the spleen. In view of the

lack of evidence the claims made for Protonuclein Beta are unwarranted. The Council, therefore, reports that it is ineligible for New and Nonofficial Remedies. (*Jour. A. M. A.*, Jan. 1, 1916, pp. 38 and 48.)

THE COMPOSITION OF LIGUID PETRO-LATUM.—As naphthene hydrocarbons predominate in Russian crude petroleums and paraffin hydrocarbons in many or most American crude petroleums, it was assumed that the petrolatums derived from these sources differed from each other in like manner. While both the naphthenes and paraffins are chemically inert, some unexplained therapeutic superiority has been asserted to reside in Russian liquid petrolatum. Benjamin T. Brooks, of the Mellon Institute, explains that most so-called "mineral oils" used for therapeutic purposes contain no paraffin hydrocarbons whatever and that, regardless of the source of the crude petroleum, the fraction which constitutes the liquid petrolatum is composed essentially of naphthenes and polynaphthenes. (Jour. A. M. A., Jan. 1, 1916, p. 38.)

STUART'S CALCIUM WAFER COMPOUND.—The A. M. A. Chemical Laboratory reports that Stuart's Calcium Wafers Compound consists essentially of calcium sulphide and aloes or aloin. Like other so-called blood purifiers, it is essentially a cathartic. (*Jour. A. M. A.*, Jan. 1, 1916, p. 51.)

Hydropsin.—According to the Ernest Bischoff Co., Inc., Hydropsin is the juice of digitalis, squill, European birch, juniper and knot weed, dialyzed and physiologically standardized. The Council on Pharmacy and Chemistry reports that the composition claimed for Hydropsin brands it as an irrational mixture in which potent drugs are combined with, and more or less covered up by, others that are obsolete and inefficient. The name, instead of indicating its composition, suggests diseases in which it may be thoughtlessly and indiscriminately used. The claim that the danger of toxic or cumulative action has been removed, if

accepted by physicians, tends to uncritical use with possible disastrous results. (*Jour. A. M. A.*, Jan, 8, 1916, p. 135.)

DIGITALYSATUM.—Digitalysatum, according to the Ernest Bischoff Co., Inc., is the dialyzed juice of fresh digitalis physiologically standardized and containing 12 per cent alcohol. Sterisol-Digitalysatum appears to be the dialysate without alcohol diluted with equal parts of physiologic salt solution. The preparations are advertised with claims which imply superiority to all other digitalis preparations. The Council on Pharmacy and Chemistry holds that attempts to create the impression that Digitalysatum possesses all the virtues of digitalis without its chief disadvantage are to be condemned as likely to lead to incautious use of the preparation. The Council therefore declared Digitalysatum ineligible for New and Nonofficial Remedies. (Jour. A. M. A., Jan. 8, 1916, p. 135.)

TIGER-BONE THERAPY AND "CLINICAL Experience."—In China the administration of powdered tiger-bone is, or was, a favorite form of treatment of supposed cardiac Since many patients have weakness. recovered after taking tiger-bone and no one has proved that they might not have died had they failed to take it, "clinical experience" stands back of the treatment. Not satisfied with the assertion of the dealers regarding the genuineness of the drug the conscientious Chinese physician subject the tiger-bone to a kind of physiologic standardization. He offers the bone to a dog! If it is an ox-bone—a frequent form of substitution—the dog will seize and eagerly gnaw it, whereas, according to the teachings of Chinese pharmacognosy, if it is a tiger-bone the dog will depart hurriedly with his tail between his legs. Much of our so-called clinical experience is not much better than that of the Chinese "clinical" evidence for tiger-bone therapy. Also, many physicians are wont to accept the statement of drug dealers without even making an attempt to check the claimed identity of the

advertised remedy. (*Jour. A. M. A.*, Jan. 15, 1916, p. 197.)

MINED ANTITYPHOID AND ANTIPARATYPHOID INOCULATION.—The use of any mixed vaccine is to be looked on askance. The simultaneous inoculation against typhoid, paratyphoid A and paratyphoid B needs further study in many directions. Reason and judgment at present would seem to approve the idea of using a mixed vaccine for the typhoid and paratyphoid infections. If a practical method of using this mixed vaccine can be devised, it seems to promise results. (Jour. A. M. A., Jan. 15, 1916, p. 193.)

TANLAC.—Food Commissioner Helme of Michigan reports: "A new panacea for the cure of 'all ailments of the stomach, kidneys and liver, catarrhal affections of the mucous membranes, rheumatism, nervous disorders and the like' is offered to the public under the name of Tanlac. The label on the bottle neatly avoids the pure drugs act by claiming to be only a 'tonic and system purifier.' An analysis of Tanlac in the laboratory of this department shows the following: Alcohol 16.4 per cent, Glycerin 2.0 per cent, Licorice present, Aloes or Cascara present, Gentian present, Alkaloids (Berberin) trace. The presence of a trace of tartaric acid shows that wine is the base of this medicine. The 16 per cent alcohol gives it the 'kick' that makes a fellow feel good and ought to fill a long-felt want in 'Dry Counties.' Aloes is a laxative. Gentian is a bitter drug, a so-called tonic. If the reader wants to be cured by the Tanlac route at one-fourth the expense, let him get a quart bottle of good sherry wine. Then go to the local druggist and get 11/4 drams of glycerin and? drams each of aloes, gentian, licorice and cascara. Mix (if you wish) and you will have Tanlac so near that neither you nor the manufacturer can tell the difference. This formula will give four times the quantity found in an ordinary \$1.00 bottle of Tanlac. (Jour. A. M. A., Feb. 26, 1916, p. 676.)

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Bacteriology and Pathology

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First District — Escambia, Santa Rosa and Walton Counties: J. Harris Pierpont, M. D., Pensacola. 1916

Fifth District—Citrus, Hernando, Lake, Marion and Sumter Counties: E. Van Hood, M. D., Ocala..1919

Ninth District—Calhoun, Holmes, Jackson and Washington Counties: J. S. McGeachy, M. D., Chipley, 1918 Tenth District—DeSoto, Lee, Manatee and Polk Counties: Y. E. Wright, M. D., Wauchula......1916

Eleventh District—Dade, Monroe and Palm Beach Counties: W. R. Warren, M. D., Kev West.....1917

Next Meeting — Arcadia — May 10-12, 1916

THE AMERICAN MEDICAL GOLF-ING ASSOCIATION.

In accordance with preliminary announcement made in The Journal, of the American Medical Association previous to the last A. M. A. convention, the American Medical Golfing Association held its first tournament in San Francisco June 21, 1915. Arrangements were then made for the organization and that is now complete with the following directors:

President, Wendell C. Phillips, New York. Vice president, James Eaves, San Francisco.

Secretary-treasurer, Will Walter, Chicago.

Plans are now being made for the second tournament to be held in Detroit at the forthcoming A. M. A. convention in June.

The directors have decided to list as charter members all fellows who shall have enrolled by April 1, 1916.

All fellows of the A. M. A. who play the game are eligible and may obtain the desired information from the secretary-treasurer, Dr. Will Walter, 122 S. Michigan Boulevard, Chicago.

Members of the British Medical Association have a similar organization for play at their annual meetings, and it is thought that this will add materially to the social interest of the A. M. A. as it has to the B. M. A. conventions.

IT PAYS THE MANUFACTURER TO MAINTAIN ETHICAL STANDARDS.

"The notice of the removal of the Dextri-Maltose manufacturing plant from Jersey City to Evansville, Ind., published in one of our advertising pages, deserves more than passing attention. It furnishes evidence of the natural growth of a manufacturing enterprise which is now vacating its old factory with 18,000 square feet of floor space for a new location in the Central West and in a new plant with 300,000 square feet of floor space—sixteen times larger than the old one.

This removal from a comparatively small to a very large housing also affords striking proof that success awaits the manufacturer who produces something the physician really wants, and markets his products in accordance with the standards set up by doctors for the sale of products they use. The first commandment for the direction of the manufacturer under these standards is: "Thou shalt not offer to both physician and public, by advertising or otherwise, anything which requires medical skill to properly use."

This commandment has been ignored by some manufacturers of infant foods, who have persistently educated the public with pseudopediatrics, thereby tending to increase infant mortality and hampering the physician in the practice of scientific, or even rational infant feeding.

But ultimate reform in the manufacture and sale of infant foods was as inevitable as the reform that has taken place in the sale of pharmaceutical products. The day of mystery and tradition in infant feeding is passing rapidly.

The recent simplification of bottle feeding, rendering it possible, without impractical complication, for the family physician to successfully adapt the diet to the individual baby, has brought about a strong conviction that the direction of infant feeding is distinctly the proper work of the physician.

This conviction has in turn created a demand for forms of carbohydrate foods which can be freshly prepared in exact proportions to meet clinical indications; and for their sale without directions for use, so that the physician can personally control the administration of the food.

The firm, which announces herewith its removal from the east to larger opportunities in the west, early recognized the requirement by the medical profession for a product used in infant feeding, made and sold exclusively for physicians, with no appeal, nor information to the public.

This firm deserves no special commenda-

tion for the course it has pursued, it being its duty to follow it. Reference to the sales of Dextri-Maltose is made simply to show that it is remunerative for manufacturers to treat the medical profession fairly."

PRELIMINARY PROGRAM.

Forty-third Annual Meeting of the Florida Medical Associaton at Arcadia, Fla., May 10-12, 1916.

WEDNESDAY, MAY 10TH, 10:30 A. M. Addresses of Welcome: DeSoto County Medical Society, Dr. M. L. Crum Response in behalf of the Association......Dr. Graham E. Henson Reports of Officers: Report of Secretary. Report of Editor of THE JOURNAL. Report of the Treasurer. Report of the Librarian. 11:30 A. M. Meeting of the House of Delegates. 2:00 P. M.

Scientific Session. Lumbar Puncture, and Examination of the Spinal Fluid...Dr. R. N. Green, Chattahoochee

Discussion opened by Dr. J. H. Randolph. Is the Intensive Treatment of Tabes Dorsalis Encouraging?.....Dr. J. C. Dickinson, Tampa The Interpretation of the Wasserman Reaction,

Drs. W. P. Dey and G. E. Henson, Jacksonville Discussion opened by Dr. H. Hanson. The Diagnosis and Treatment of Syphilis.....

...... Dr. J. E. Gammon, Jacksonville The Correlation of Clinical and Laboratory Diagnosis of Diphtheria.....

......Dr. H. Hanson, Jacksonville Nasal Diphtheria.........Dr. U. S. Bird, Tampa The Bacteriology and The Channels of Invasion of Acute Otitis Media.. Dr. F. J. Walter, Daytona Discussion opened by Dr. R. Jefferson

and Dr. Ingram.

The History of Medical Inspection of School Children in Florida....Dr. O. J. Miller, Sanford Discussion opened by Dr. C. E. Terry, Dr. J. Y. Porter and Dr. C. D. Christ.

Diseases of the Lymph Nodes and Ductless Glands in Children: Their Causes and TreatmentDr. G. O. Spears, Baker Neurasthenia......Dr. G. C. Kingsbury, Largo

Discussion opened by Dr. R. N. Green.

May 10TH, 8 P. M. Public Meeting at the Public Health Train. President's Address: Conservation of Health	Intestinal Obstruction, Its Diagnosis and Treatment, with Report of Cases
Roentgen Diagnosis of Duodenal Ulcer	Discussion opened by Drs. Duffy and Bartlett.

Reviews from Current Literature

SKULL FRACTURES

Besley, Frederick A.: A Contribution to the Subject of Skull Fractures. J. A. M. A., Vol. LXVI, 1916, p. 345.

Beslev analyzes one thousand cases of skull fracture, and reports on seventy-four cases examined at necropsy. From this mass of material he makes some interesting and instructive observations. He takes issue with the theory of fracture produced by a bursting force at a distance from the site of injury, and states that fracture of the base is the result of an inbending force at the articulation of the condyles and atlas, or due to an extension downward of a fracture of the vault. He calls attention to the frequent association of vault and basal fractures; while clinically the association was noted in but 33 per cent of the 1,000 cases, yet 13 per cent of the seventy-four cases examined at autopsy showed the combined fractures. He believes that the association is much more frequent than commonly supposed and is illustrative of the difficulties of diagnosis of the exact location of the line of fracture.

In diagnosing head injuries, the history is of major importance. If skull fracture is compound, with bone exposed and showing inbent fracture lines or depression, the diagnosis is obvious. If, however, the soft tissues are contused but intact the diagnostic difficulties are greatly increased, since "it is almost impossible to palpate a depression in the skull through an intact scalp." exudate beneath the fascia may almost exactly simulate a broken bone edge. The X-ray is obviously the surest diagnostic aid, particularly if stereoscopic plates are used. The clinical signs vary as to the amount of damage to tissue and increase of intracranial pressure from hemorrhage, edema, depressed bone, etc.

The classical signs of unconsciousness, slow pulse, labored respiration, high blood pressure, choked disc and vomiting are usually present with increased intracranial pressure.

Bleeding from the cavities is pathognomonic. Hemorrhage from the ear or ears occurred in 316 cases, and from the nose and mouth in 343.

His analysis of the pulse rate is most interesting, since as he states "it is surprising to note how infrequently it remains slow." The pulse rate in the fatal cases averaged from 105 to 116, while the average for the non-fatal cases ranged, for fracture of the vault without depression, 71; fracture of the vault with depression, 92, and fracture of the base, 81.

There were no distinctive respiratory signs, and there were pupillary changes in but 19½ per cent.

R. C. T.

POTT'S DISEASE

Wolcott, W. E.: Pott's Disease Treated by Operation. J. A. M. A., Vol. LXVI, 1916, p. 108.

Wolcott summarizes the results of a number of surgeons in their operative treatment of tuberculosis of the spine. Six hundred and eighty-two cases were recorded, both types of operation, the tibial transplant, and the ankylosis of vertebral spines, being included.

It is claimed that 83 per cent of the patients were benefited; that the curative ankylosis is definitely hastened, that the likelihood of an increase in deformity is diminished and that the period of recumbency and fixation is materially lessened.

The cases reported cover all types and stages of the disease, including twenty-eight cases of abscess.

There were thirty deaths following operation. The causes of death were generally ascribed to concomitant disease, such as pulmonary tuberculosis, tubercular and septic meningitis, etc.

It seems probable that in selected cases, in which operation is carefully done under absolute asepsis, that the mortality directly due to operation should be practically negligible.

R. C. T.

DIPHTHERIA CARRIERS

Roy, K. A.: The Treatment of Diphtheria Carriers with Iodized Phenol. J. A. M. A., Vol. LXVI, 1916, p. 800.

The author reports very favorable results from the local use of iodized phenol (acidum carbolicum iodatum) of the National Formulary. The cases reported consist of carriers convalescent from clinical diphtheria in the infectious ward of the Charity Hospital (New Orleans), and some that did not have diphtheria but were persistent carriers. In some cases other methods had been persistently tried with failure.

The iodized phenol contains 60 per cent phenol (carbolic acid), 20 per cent iodin crystals and 20 per cent glycerin. In pharyngeal cases, the tonsils, uvula and posterior wall of the pharynx were swabbed every forty-eight hours until negative cultures were obtained. In nasal cases, the entire anterior part of the nasal cavity was swabbed every forty-eight hours. Care was taken not to allow the preparation to run over the face or to drop into the larynx. Cultures were always made a few minutes before the local application. In this way forty-eight hours elapsed after each application before another culture was made.

Seventeen cases were treated. Negative cultures were obtained after one application in six cases; after the second application in five cases; after the third application in two cases; after the fifth application in one case; and after the sixth application in two cases. One nasal case was under treatment for twenty-one days and required nine applications.

No bad results have been noticed from the use of this rather strong preparation. The application is painful for half a minute or less until the anesthetic action of the phenol takes effect.

The manner in which this preparation acts we do not know. The phenol in the preparation undoubtedly destroys the outer layers of epithelium. It probably does not reach the organisms in the cryptus, but it may permit the more thorough penetration of the iodin.

T. T.

THE LATENT RALE

Bray, H. A.: The Latent Rale in the Diagnosis of Incipient Tuberculosis. J. A. M. A., Vol. LXVI, 1916, p. 788.

The term latent as here employed designates the rale elicited only by the aid of cough. Special contributions devoted to the diagnosis of incipient tuberculosis have specifically indicated the value to be attached to this procedure, and of interest in this respect may be the advice imparted by the elder Janeway to his pupil, Trudeau, about forty years ago: "Invariably employ cough to elicit rales in tuberculosis."

The author's present study was undertaken to determine the incidence of rales before and after coughing, and the statistics presented are based on a study of the physical examination of 226 patients at the New York State Hospital for Incipient Pulmonary Tuberculosis.

Many interesting tables are given, c. g., the one in which the cases are classified on the basis of presence of rales before and after coughing in which it is shown that in only 23 per cent rales were demonstrated without the aid of cough, while in 76 per cent the rales were latent, being demonstrable only by the aid of cough. In all examinations it was unconditionally demanded that the respiratory excursion in every instance should be deep and sharp before concluding that rales were absent, and that cough was necessary to establish their presence.

Regarding the technic the author says: "The patient can be directed to cough at any point in the respiratory cycle. At the zenith of the inspiratory phase the cough is loud and explosive in character, tending to obscure the presence of adventitious signs, and should be avoided. Although latent rales may be elicited in certain cases irrespective of the position of the cough

in the respiratory cycle, still in cases presenting only a few localized latent rales these may best be elicited if the cough is inserted at about the beginning of the middle third of the expiratory effort. At the end of expiration the insertion of the cough also favors the development of the latent rale."

CONCLUSIONS.

- 1. The rale is a very constant sign in incipient pulmonary tuberculosis.
- 2. Among the early physical signs, the rale is the one definite sign.
- 3. The rales are latent in approximately 75 per cent of the moderately advanced cases.
- 4. Localized apical rales are almost pathognomonic, other conditions that produce them being of rare occurrence.
- 5. The technic of the procedure necessary to elicit the latent rale is not difficult, and can be acquired after a few trials.

T. T.

STERILITY

Fellenberg, R. von: Ueber die Behandlung der weiblichen Unfruchtbarkeit. (The Treatment of Sterility in Women.) Cor.-Bl. f. schweiz. Aertze, 1915, Vol. XLV, p. 1409. (Extract from Int. Abstract of Surg.)

While sterility may be due to various causes (gonorrhœa, uterine displacements, vaginismus, etc.), there is no doubt, according to the author, that in some cases it is due to alterations in the internal secretions, both of the thyroid and the ovaries.

At times it may be due to an excess of internal ovarian secretion rather than a deficiency in the secretion. In the case of disease of one ovary an inhibitory effect may be exerted on the other ovary which disappears after removal of the affected organ.

Bab in 1909 first suggested ovarian treatment for sterility due to defective ovarian function. He advises the addition of lecithin to the ovarian preparation. He holds that the ovarian preparation has three effects: (1) a local action on the ovary that corrects menstrual disturbances; (2) a local stimulating effect on the uterus and tubes so that their growth is favored; (3) a stimulating effect on the health in general.

Von Fellenberg has used ovarian treatment in a number of cases with excellent results, combining it also with measures to increase the blood supply of the parts.

Sterility may also be caused by defective thyroid function. In such cases there is an abnormally rapid coagulation of the blood, relatively low neutrophile and high lymphocyte count, nervous irritability, spastic constipation and migrane. Kocher believes that anæmia is often due to defective thyroid function, while Sehrt claims that infantile pelvic organs are always associated with such defective function.

Von Fellenberg has given thyroid treatment successfully in a number of such cases, pregnancies occurring in women who had previously been a long time sterile. There was also improvement in the general health and the spastic constipation disappeared. G. R. H.

NEW AND NONOFFICIAL REME-DIES.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

CALCIUM PHENOLSULPHATE, P. W. R.— A non-proprietary brand of calcium phenolsulphate admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia, Pa.

IRON LACTATE, MERCK.—A non-proprietary brand of ferrous lactate admitted to New and Nonofficial Remedies. Merck and Co., New York.

SODIUM PHOSPHATE, MONOBASIC, MERCK. —A non-proprietary brand of sodium acid phosphate admitted to New and Nonofficial Remedies. Merck and Co., New York.

PHLORIDZIN, MERCK.—A non-proprietary

brand of phloridzin admitted to New and Nonofficial Remedies. Merck and Co., New York

SULPHANILIC ACID, MERCK.—A non-proprietary brand of sulphanilic acid admitted to New and Nonofficial Remedies. Merck and Co., New York.

ERGOTIN, MERCK.—A non-proprietary brand of extract of ergot, purified, admitted to New and Nonofficial Remedies. Merck and Co., New York.

Antithyroid-Moebius Tablets, ¾ GR.—Each tablet contains antithyroidin-Moebius 1-4 gr. Merck and Co., New York.

EUQUININE TABLETS, 2 GRS.—Each tablet contains euquinine 2 grains. Merck and Co., New York.

EUQUININE TABLETS, 5 GRS.—Each tablet contains euquinine 5 grains. Merck and Co., New York.

FERRATIN TABLETS, 7½ GRS.—Each tablet contains ferratin 7½ grains. Merck and Co., New York.

STYPTICIN HYPODERMIC TABLETS, 3/4 GR.—Each tablet contains stypticin 3/4 grain. Merck and Co., New York.

STYPTICIN SUGAR-COATED TABLETS, 3/4 GR.—Each tablet contains stypticin 3/4 grain. Merck and Co., New York.

STYPTICIN DENTAL TABLETS, 3/4 GR.—Each tablet contains stypticin 3/4 grain. Merck and Co., New York. (Jour. A. M. A., Jan. 1, 1916, p. 31.)

DIONIN TABLETS, ¼ GR.—Each tablet contains dionin ¼ grain. Merck and Co., New York.

DIONIN TABLETS, 1 GR.—Each tablet contains dionin 1 grain. Merck and Co., New York.

THEOPHYLLIN SODIUM ACETATE TABLETS, 0.15 GM.—Each tablet contains theophyllin sodium acetate 0.15 gm. Merck and Co., New York.

TRIPHENIN TABLETS, 5 GR.—Each tablet contains triphenin 5 grains. Merck and Co., New York.

TUBES TROPACOCAINE HYDROCHLORIDE, STERILIZED, 1 GR.—Each tube contains tro-

pacocaine hydrochloride, 1 grain. Merck and Co., New York.

VERONAL-SODIUM TABLETS, 5 GRS.—Each tablet contains veronal-sodium 5 grains. Merck and Co., New York.

IODIPIN TABLETS, 3 MIN.—Each tablet contains iodipin 3 minims. Merck and Co., New York.

APIOL, MERCK.—A non-proprietary brand complying with the standards for apiol. Merck and Co., New York.

CREOSOTE CARBONATE, MERCK.—A non-proprietary brand complying with the standards for creosote carbonate. Merck and Co., New York.

PHENOLPHTHALEIN, MERCK.—A non-proprietary brand complying with the standards for phenolphthalein. Merck and Co., New York.

QUININE TANNATE, MERCK.—A non-proprietary brand complying with the standards for quinine tannate. Merck and Co., New York.

Sodium Nucleinate, Merck.—A non-proprietary brand complying with the standards for sodium nucleate. Merck and Co., New York. (*Jour. A. M. A.*, Jan. 8, 1916, p. 117.)

Swan's Typhoid Bacterin (No. 44; Prophylactic). — Marketed in packages (hospital) of thirty-six vials and in packages (board of health) of seventy-two vials. Swan-Myers Co., Indianapolis, Ind. (Jour. A. M. A., Jan. 15, 1916, p. 191.)

RADIO-REM, OUTFIT No. 5.—An apparatus designed for the production of radioactive drinking water by the action of radium sulphate contained in terra cotta plates. It consists of two plates contained in 250 c.c. bottles; when the bottles are filled with water the two plates impart about 3.6 microcurie (10,000 Mache units) to 500 c.c. water daily. For action, uses and dosage refer to the article on radium in New and Nonofficial Remedies. Schieffelin and Co., New York. (Jour. A. M. A., Jan. 15, 1916, p. 191.)

DIPHTHERIA IMMUNITY TEST (SCHICK

TEST).—This test is intended to determine those persons who have not in their blood an amount of diphtheria antitoxin sufficient to render them immune to diphtheria. The test is of special value for use in institutions and among groups of persons exposed to diphtheria, in order that it may be determined which individuals should be given an immunizing dose of diphtheria antitoxin. It is also of value in the diagnosis of other conditions simulating diphtheric infections.

DIPHTHERIA TOXIN STANDARDIZED (SCHICK TEST).—Marketed in sealed capillary tubes each containing a solution of one-fiftieth of a minimal lethal dose for guinea pigs of diphtheria toxin. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Jan. 15, 1916, p. 191.)

DIMAZON (DIACETYLAMINOAZOTOLUENE.) —An orange colored powder, insoluble in water but soluble in alcohol, chloroform, oils, fats and petrolatum. It does not stain the hands or cloth. It is said to be useful to promote the growth of epithelium in the treatment of burns, wounds, chronic ulcers, etc. Dimazon is marketed as follows:

DIMAZON OIL.—2 per cent.

DIMAZON OINTMENT.—2 per cent.

DIMAZON POWDER.—5 per cent. Heilkraft Medical Co., Boston, Mass. (Jour. A. M. A., Jan. 22, 1916, p. 275.)

BETANAPHTHOL BENZOATE, ROCHE.— A non-proprietary brand complying with the standards for betanaphthol benzoate. Hoffmann-LaRoche Chemical Works, New York.

BETAIN HYDROCHLORIDE, ROCHE.--A non-proprietary brand complying with the standards for betain hydrochloride. Hoffmann-LaRoche Chemical Works, New York. (Jour. A. M. A., Jan. 22, 1916, p. 275.)

ERGOTININE CITRATE, ROCHE.—A non-proprietary brand complying with the standards for ergotinine citrate. Hoffmann-LaRoche Chemical Works, New York.

HOMATROPINE HYDROCHLORIDE, ROCHE.—A non-proprietary brand complying with the standards for homatropine hydrochloride. Hoffmann-LaRoche Chemical Works, New York.

SEIDEN PEPTONE, ROCHE (SILK PEPTONE.)—A non-proprietary brand complying with the standards for silk peptone. Hoffmann-LaRoche Chemical Works, New York.

THEOBROMINE AND SODIUM ACETATE, ROCHE.—A non-proprietary brand complying with the standards for theobromine sodium acetate. Hoffmann-LaRoche Chemical Works, New York. (*Jour. A. M. A.*, Jan. 29, 1916, p. 355.)

ICHTHALBIN TABLETS, 5 GR.—Each tablet contains ichthalbin 5 grains. Merck and Co., New York.

TRIFERRIN TABLETS, 5 GR.—Each tablet contains triferrin 5 grains. Merck and Co., New York.

H. K. Mulford Co.:

Mercurialized Serum, Mulford, Mercurialized Serum Nos. 1, 2, 3, 4, 5, 6. Schieffelin and Co.:

Radio-Rem, outfit No. 4.

Be sure and attend the Annual Meeting of the Florida Medical Association Arcadia, May 12-14

Publisher's Notes

AGAR IN CHRONIC CONSTIPATION.

As is perhaps generally known to physicians, Agar (sometimes designated Agaragar), is a Japanese gelatin derived from seaweed. This substance has the natural property of absorbing water readily, and retaining it. It resists the action of intestinal bacteria, as well as that of the enzymes. Its use in the treatment of chronic constipation is based upon the fact that when ingested it passes practically unaltered into the intestine, where it adds to the bulk of the feces and thereby stimulates peristalsis; also it softens hard and dry fecal masses, thus favoring normal evacuation.

Parke, Davis & Co. supply a superior quality of Agar in granular form which is very convenient for use and free from the somewhat unpalatable character of the ordinary commercial product. It is marketed in pound and quarter-pound cartons.

One or two heaping tablespoonfuls, according to individual requirements, taken morning or evening, at meal-time, with milk or cream or mixed with a cereal food, usually produce the desired result.

POWERFUL ANTISEPTIC AND DIS-INFECTANT.

A solution of Parke, Davis & Co.'s Germicidal Soap containing 1:5000 mercuric iodide, the active ingredient, destroys pusproducing micro-organisms in less than five minutes. The soap has been tested with pus, cholera, typhoid and diphtheria germs, and anthrax spores, and in hundreds of experiments none of the germs survived two minutes. The tests referred to were made with solutions representing but one part of the antiseptic material in each five

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ORIGINAL ARTICLES

PLASTIC TENDON SURGERY.

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There is a wide field of usefulness for plastic tendon surgery in the correction of deformities, particularly the contracture deformities resulting from untreated or neglected paralysis. Cases of contracted or divided tendons, or tendons caught in scar tissue following an injury, as well as cer-



Figure 1.

tain types of congenital contracture deformity are also amenable to relief through operative tendon work. Frequently, however, plastic tendon surgery must be in conjunction with operative procedures on bone or joints to attain maximum benefits.

The most brilliant results through tendon surgery are undoubtedly obtained in the late cases of poliomyelitis which present deformities or loss of function. It is very unusual for poliomyelitis to leave a permanently complete residual paralysis of the entire limb. Infantile paralysis usually permanently affects one muscle group or parts of different groups or individual muscles, so that there is almost always an opportunity to transfer energy of motion by the transplantation of a sound, active tendon or a part of a sound tendon into a tendon of a paralyzed muscle or into the bony insertion of a paralyzed muscle.



Figure 2.

While occasionally good results are to be obtained in spastic paralysis, yet this field is not especially promising, since while contracture deformity may be relieved, yet on account of the spasticity of all the rest of the muscles in the limb, function is obtained exceptionally and after a long period of massage, muscle stretching and muscle training. The flaccid paralyses, such as poliomyelitis, almost always offer some

hope for improvement through tendon transplantation.

A good deal of work has been done recently in paralytic cases in the surgery of nerves, either by transplantation in whole or part of sound nerve trunks into paralyzed nerves. The results in nerve transplantation are entirely problematical and uncertain, and there is always the danger, in the event of an operative failure, that the limb will be materially weakened through a de-



Figure 3.

struction of a part of its nerve supply, which is always primarily defective and insufficient.

We have at our command a number of valuable operative procedures, varying from the simple tendon lengthenings by tenotomy or tenorrhaphy to the more extensive transplantation of tendon into tendon or transference of tendon to new insertions in bone.

The writer has not found it necessary to use silk ligaments or other foreign material to fill in gaps in tendons, though this method has been in use with more or less success for many years. It seems preferable to lengthen tendons with pieces of tendon itself, or if necessary, by throwing

down a longitudinal section of muscle sheath.

The perfection of an absolutely aseptic finger free operative technique allows us to transplant with impunity pieces of fascia lata to provide new tendon sheaths through which tendons will move freely. We have



Figure 4.

transplanted fascia lata and formed sheaths for many of the tendons of the forearm, as well as tendons of the fingers and the hand; in the leg we can usually obtain sufficient deep fascia or muscle sheath to form a smooth covering for the operated tendon. It is unnecessary to provide new sheaths for tendons which pass through fat; apparently in such cases new sheaths are au-

tomatically formed, or in any event, tendons do not become adherent to the surrounding tissue.

Tendon transplantation, particularly in poliomyelitis, is an exceedingly interesting field of work since each case must be studied and treated according to its individual requirements. They are all problems



Figure 5.

in the mechanical transference of energy.

The cases illustrated herein, with one exception, have been selected from patients treated under the auspices of the Florida State Board of Health during the past year and are illustrative of a few of the conditions which are subject to operative improvement.

I am glad to take this opportunity to again point out the inadvisability of the

promiscuous use of steel braces, particularly in the later stages of poliomyelitis. In all limbs not totally paralyzed every effort should be made to promote muscle growth and to increase muscle power and function through active use and exercise after de-



Figure 6.

formity has been corrected and the limb has been restored to its normal position. The constant wearing of any type of mechanical appliance which takes the work from the residual muscle will produce additional muscular weakness and atrophy, and thus defeat the principal object of treatment. Braces should be used so far as possible only to prevent deformity, to maintain the limb in proper line and to prevent lateral motion. Supporting braces with artificial muscles or lock joints are

muscles were sound. In this case the tendon of the almost totally paralyzed tibialis anticus was shortened, the tendon of the peroneus brevis was cut at its insertion and transferred across the front of the foot into the tendon of the tibialis anticus. The tendo Achilles was lengthened one and onehalf inches. Fig. 2 shows the final result



Figure 7.

only necessary when limbs are totally, or almost wholly, paralyzed.

Fig. 1 shows a paralytic talipes valgus with a complete dropping of the arch (the typical flail-foot), the result of poliomyelitis with residual paralysis of the foot flexors. The foot extensors and the peroneal



Figure 8.

with perfect position and a very good muscle balance. Fig. 3 shows the restoration of the arch through the transverse upward pull of the peroneus brevis.

Fig. 4 is also illustrative of the end results of neglected poliomyelitis. There was a paralytic talipes valgus of the right foot, the result of paralysis of the tibialis anticus.

The left limb was shortened, atrophied, with flexion contracture and backward dislocation of the knee with a complete talipes equino varus. In this case it was necessary to combine work upon bone and joints and tendons. An astragalectomy with partial resection of the scaphoid and cuboid bones, tenorrhaphy of the tendo Achilles and tenotomy of the tibialis posticus were necessary to correct the position of the left foot. A resection (arthrodesis) was done on the left



Figure 9.

knee joint, the patellar and lateral ligaments of the knee were tightened and the patella was nailed to the femur. On the right foot a part of the tendon of the sound, strong extensor longus digitorum was transplanted into the base of the first metatarsal. Fig. 5 illustrates the result of the tendon transplantation on the right foot; the left limb still in plaster. Fig. 6 shows the boy in braces just before leaving for home. The brace on the left leg with built-up shoe sole will necessarily have to be worn because of the total paralysis of that limb, though eventually it will not be necessary to extend the brace above the knee. The brace on the right limb will be discarded as soon as it is certain that the tendon transplant has become entirely sound.

Figs. 7 and 8 are of a case of a moderate paralytic talipes equino valgus which was corrected by simple tenorrhaphy of the tendo Achilles, and development of the extensor of the great toe to replace the paralyzed tibialis anticus.



Figure 10.

Fig. 9 shows a case of late poliomyelitis with contracture deformity of hips, knees and both feet. In this case, in addition to tenotomies and tenorrhaphies it was necessary to do an astragalectomy on the left

foot and an astrago-scaphoid arthrodesis on the right. This boy had never walked. The final result is shown in Fig. 10. The boy at this time was able to stand alone in his braces without support and was beginning to walk with his braces and one crutch.

Figure 11.

Figs. 11 and 12 are before and after treatment of a congenital talipes equino varus which required tenorrhaphy of the tendo Achilles on both sides, plaster treatment and exercises.

Fig. 13 was a case of tuberculosis of the ilium with contracture deformity of the left

thigh and knee. Fig. 14 shows the same patient after removal of practically the entire ilium and transference of the origin of the rectus muscle from the anterior su-



Figure 12.

perior spine downward. The child's general improvement is noteworthy.

Fig. 15 is a case of multiple contracture deformity of the thighs, knees and feet, the result of poliomyelitis, in which astragalectomy of the right foot was combined with tenorrhaphy of both tendo Achilles and later with tenotomies and tenorrhaphies of the hamstring tendons, tenotomy of the fascia lata and the transplantation of the origin of the rectus and sartorius. Fig. 16 shows the limb straight with beginning ability to stand and to walk with crutches and without braces. The left limb is practically



Figure 13.

normal. Braces will probably be needed for the right foot and leg.

Fig. 17 is a late radiograph of a crushing injury in which the soft tissues and tendons of the back of the hand and wrist were badly lacerated with multiple compound fracture of the head of the radius, metacarpals of thumb, index and third finger, styloid process of ulua and unciform. This injury was well treated by the attending physician until entirely healed with the exception of the ununited overlapped fracture of the metacarpal of the

index finger. The first two fingers were, however, absolutely stiffened in full extension because of the extensor tendons being



Figure 14.

caught in bony callus and in the extensive superficial scar. In this case, in addition to resection and elevation of the ends of the metacarpal of the index finger, the extensor tendons were dissected out of the scar tissue on the back of the hand, repaired and placed in a new sheath which was formed of transplanted fascia lata. Passive motion was started in the fingers after three weeks and active and passive motion, massage and



Figure 15.

exercises were continued until at the end of four months there was complete motion in all fingers. The flexion and extension of the fingers at the end of the third month are shown in Figs. 18 and 19.

As in the surgery of bones, tendon work demands all the refinements of absolutely aseptic operative technique. Infection, even slight, is almost always disastrous, hence we should endeavor to allow nothing to enter the wound that has been touched

by fingers or, most important, that has touched skin.

Skin edges of wounds should be protected by gauze or towels held to the cut margins by clips, and all work should be



Figure 16.

instrumental, sutures are always tied with forceps—never fingers. All instruments are handled and handed to the surgeon with forceps. The nurses usually work with bare or unsterile hands so that the temptation to handle instruments, sponges and suture material is eliminated.

Kangaroo tendon makes a very satisfactory suture material, though chromic gut has been used, and exceptionally suture strands



Figure 17.



Figure 19.

have been stripped from living muscle sheath or from the operated tendon itself.



Figure 18.

APPENDICITIS: ITS SURGICAL HISTORY, DIAGNOSIS AND TREATMENT.*

J. Whiting Hargis, M. D., Pensacola, Fla.

Surgery of the veriform appendix as practiced today is only a development of

*Read before the Escambia County Medical Society at Pensacola, January 25, 1916.

the last thirty years. The incision and evacuation of old encysted collection of pus in the right iliac fossa resulting from an inflammation in the appendix, was practical as far back as the beginning of the Christian era.

After the year of 1700 occasional records are found of the evacuation of blood and pus in the abdominal cavity. The first case in which disease appendix is clearly recognized among these and recorded is that of Mestivier in 1759, in a man with a suppuration in the right iliac fossa, which discharged about a pint of pus on incision; after death a pin was found in the appendix.

From this date (1759) onward, tumors of the right iliac fossa received increasing attention. Their treatment by the time-honored incision at the point of fluctuation was recommended and practiced, but the notion of incising right iliac tumors before any fluctuation was not attempted and it was not until 1848 that incision was made at an earlier stage.

Hancock, an English surgeon, in 1848 reported a case to the Clinical Society in London of so much historical interest that I venture to quote it somewhat fully. Hancock begins by observing that abscesses of the abdomen connected with the cecum or large intestine, attended by fluctuation, had from time to time been opened, but he was not aware of any instance in which an operation had been attempted under the circumstances about to be detailed. Other surgeons had waited for the presence of fluctuation to prove the presence of matter, but this case shows that this unequivocal sign should not always be waited for.

His patient, a married woman, thirty years of age, had had bad health following an injury to the spine, twelve years before. Since then, the bowels never moved without an enema, and she had suffered occasional attacks of pain. The present illness began at the end of her fifth pregnancy, which was characterized by incessant nausea; she

was seized suddenly, while out driving, with an unusual dragging pain in her right side, obliging her to take to her bed and to use opiates. Four or five days later a premature delivery of a child followed, the child living only a few hours. The day after delivery, while turning in bed, she felt a severe pain and snapping sensation in the right groin, and from that time she suffered greatly with pain in that locality. On the third day a hard swelling could be traced high up in the inguinal region. When seen by Hancock on the seventh day, there was intense pain in the right iliac fossa, and tenderness over the whole abdomen with tympanites. Two days later symptoms of general peritonitis appeared. There was a cord-like swelling in the inguinal region with thickening and hardening extending out toward the ilium. An operation was then proposed, agreed to, and, the patient being under the influence of chloroform, an incision, about four inches long was made from the spine of the ilium above Poupart's ligament, and as close to it as possible. Upon opening the abdomen, a quantity of serum poured out, mixed with air bubbles and patches of false membrane. This discharge continued for some time very freely, and on the fifteenth day two fecal concretions were found in the wound, which had been very painful. From this date the patient improved, and ultimately recovered."

In the discussion following this report of Doctor Hancock's, he urged strongly that the fecal concretions found in the wound were convincing evidence that the abscess had started in the appendix. Nothing more was heard of the surgical treatment of such tumors, in the absence of fluctuation, for nearly twenty years.

Doctor Willard Parker, of New York, took the next step in the development of the surgery of the appendix, in 1867. His name is so intimately associated with this subject in America that the method he pur-

sued became widely known, and is still called the Willard Parker operation. It was in this year, 1867, that Parker published four cases in which he had treated abscesses in the right iliac fossa, consequent on inflammation of the appendix, by incision and evacuation, one dating as far back as 1847. In the intervening years he gradually became convinced that it was not necessary to await fluctuation before making an incision, and the last case afforded him the opportunity of putting his theory to a successful test. The important object of his writing, therefore, was to declare what good results were likely to attend an early incision, and to counsel its wider adoption. Parker's paper at once provoked discussion and his method came into use immediately.

The year following Parker's publication, the principle of antisepsis was discovered and introduced by Sir Joseph Lister. Then at last, with the advent of Lister, a host of new conceptions, heretofore lying dormant under the dread of working more woe than weal, were quickened into the familiar procedures by which we now, as the weeks run their course, save thousands of lives.

Evidence of the transformation taking place in the entire surgical field becomes more and more evident after this date.

History shows that Doctor R. J. Hall, of New York, performed the first operation on the appendix in the United States which is the third case on record in May, 1866, and published it the following month in *The New York Medical Journal*.

Dr. H. B. Sands, of New York, operated for disease of the appendix, after making a definite diagnosis, on December 30, 1887, and published the case on June 16, 1888. Sands has for some time taught the principles he here put into practice, and it was his conviction that the operation he reported was the first successful one of its kind. Sands' patient was a young man twenty years of age; ill for some days with

a pain in the lower abdomen accompanied by vomiting in the first stages. There were exquisite tenderness over the right iliac fossa and tympanites, but no tumor. Doctor Sands made a diagnosis of acute septic peritonitis caused by a perforation of the appendix, and advised immediate operation.

C. McBurney, in 1889, deals with the same subject in an article which ever deserves to be ranked as one of the classics in the surgical history of America. So admirable and clear are his views as to the proper surgical treatment of appendicitis that the experience of twenty-five years has not brought any radical or important changes in his method, which no doubt you all are familiar with.

It is generally recognized that appendicitis is by far the most common inflamatory disease of the abdomen, especially in men under thirty and in children in both sexes. Sudden pain in the right iliac fossa with local tenderness and muscular rigidity are significant of the disease in the large majority of instances; there are, however, many cases of obscure development in which the cardinal signs of appendicitis are very inconspicuous; moreover, few diseases present so many stages each characterized by a different set of symptoms, while, on the other hand, every one of these cardinal symptoms may be absent, or, if present, may indicate some other affection. The physician may not see the patient, in fact he rarely does see him, during the initial stage of the attack, and by the time the disease comes under observation, the acute symptoms have subsided and the pain become localized, it may be in the right iliac fossa, but frequently at a point remote from the normal position of the appendix; again, in other instances, the pain may have ceased entirely, and there may be a lull in all the symptoms, which in one case denotes improvement and in another marks the onset of grave complications. It is not only the combination of symptoms and their ap-

pearance in a distinct order, however, which indicate the character and progress of the malady, but the impression made upon the trained mind by their combination and progress. In every case, therefore, a clear description of the onset and course of the attack should be obtained, the subjective and objective symptoms carefully weighed, and, what is often of the utmost importance, the history of the patient in regard to previous attacks of appendicitis investigated. Finally, when the diagnosis has been made in this manner by direct evidence, it should be confirmed by a general examination of the patient, in order to verify it by exclusion and thus avoid the chagrin of operating for a supposed appendicitis, and finding a case of, perhaps, thoracic disease with pronounced abdominal manifestations. The recognition of appendicitis in the majority of cases is easy, but it is often difficult, and sometimes impossible, to determine the grade of the infection and the extent of the complications; moreover, in the early stages of the disease there are no symptoms nor combination of symptoms by which the probable course of events can be foretold with any certainty.

In the presence of the cardinal symptoms, namely, sudden, acute abdominal pain, tenderness on pressure over or near McBurney's point, and localized muscular rigidity, the diagnosis of appendicitis is justified in the majority of cases. Confirmatory symptoms, such as nausea and vomiting, constipation or diarrhea, elevation of temperature and acceleration of pulse, make the diagnosis more secure, and the presence of tumor puts it beyond doubt.

It must be remembered, however, that the position of the appendix is very variable, and it may be directed to almost any point in the abdomen, hence the local symptoms are sometimes referred to the region of the gall-bladder.

Here the writer wishes to relate to you a case which came under his observation

and which demanded immediate surgical interference.

On June 20, 1913, at 7:00 o'clock in the morning, I was called in to see Mrs. S., thirty years of age, whose general health had always been good. She stated to me that she had been suffering all night with severe pains in the region of her liver, as she supposed, and if something wasn't done to give her relief, she would die.

A year previous to this, she had had pains in the right iliac region from time to time, but paid very little attention to them. She suffered with constipation and it was a difficulty for her bowels to move. Upon examination, I found her temperature was 97°, tongue coated, pulse rate 130 and pain in general over the whole abdominal cavity.

From a previous history, I made a diagnosis of suppurative appendicitis and prepared my patient for immediate operation. With the assistance of my confrere. Doctor Bruce, we made the incision at McBurney's point—extending upwards towards the liver. We found a gangrenous appendix adhered to the lobe of the liver and embedded in a network of adhesions.

After we delivered it, we found that it contained a portion of the backbone of a chicken, a broiler. The patient responded rapidly and made a splendid recovery.

What we wish to accomplish in the treatment of appendicitis is not to save half of our cases, nor four cases out of five, but *all* of them. In my opinion there is only one logical treatment of the disease, namely, the excision of the diseased organ as soon as the diagnosis is made.

DIRECT TRANSFUSION WITH BERNHEIM TUBES.*

H. M. Ginsberg, M. D., Pensacola, Fla.

Direct transfusion was more or less popular many years ago, but was given up

^{*}Read before the Escambia County Medical Society at Pensacola, January 11, 1916.

in favor of salt solution, because of technical difficulties and because of the belief that what was required was not blood, but a bland isotonic, circulating medium. Advances in the technic of arterial surgery led Crile to make experimental researches in direct transfusion, and he found it had many advantages over infusion, especially in post-operative hemorrhage.

The transfusion of blood from one individual to another may be accomplished either by joining the vessels by suture or tube (the direct method), or by withdrawing blood from one individual into a syringe or vessel and then injecting it into the other individual (the indirect method).

Transfusion has been found serviceable in acute anæmia from hemorrhage of traumatic, operative, or other origin, such as gastric or typhoid ulcers, ruptured extrauterine pregnancies, etc. It has been used with some success to raise the blood resistance of anæmic patients as a preliminary to operations.

In pernicious anæmia, the benefit has not been permanent, but in melena neonatorum it has proved most valuable; its use in hemophilia in general has been satisfactory.

In illuminating gas and carbon monoxide poisoning and others, where methemoglobin is formed, Crile has resuscitated numbers of cases by transfusion. It is also recommended in jaundiced people before a severe operation.

As to the technic, there are several methods that may be used, such as Crile's Cannula, where vein of the recipient, usually the internal saphenous, is cuffed over the cannula and tied firmly in place with fine linen and the radial artery of the donor is drawn over the cuffed vein on the cannula and tied in place.

Another cannula that is being used a great deal is Elsberg's instrument. The cannula is built on the principle of a monkey wrench and can be enlarged or narrowed by means of a screw. The prin-

ciple is practically the same as the Crile method—that is, the intima of the vessels are brought in contact with each other to prevent blood clotting.

Another method is the use of Bernheim's tubes, and is the method I prefer, on account of its simplicity.

The technic as recommended by Bernheim is as follows:

The radial artery is dissected out with $\frac{1}{2}$ % novocaine for a distance of two (2") inches. Tie the artery doubly at the distal end of the wound and cut between ties, thus allowing about 11/2" of the vessel to be free in the wound, constantly washing out the field of operation with salt solution. Place a bull dog or Crile clamp on the vessels on the proximal end of the wound; a small cut is then made into the artery with a fine pair of scissors, the opening being made at right angles to the course of the vessel. Then every trace of blood is washed out of the vessel with warm salt solution and then with liquid vaseline. This is best done with an eve dropper. vessel having been prepared, the bevelled end of the tube is inserted into the artery and held there by a tie thrown around the neck, and liquid vaseline is again injected into the vessel through the tube, and the whole wrapped in gauze saturated with salt solution.

The vein of the recipient, usually the medium basilic, is treated in the same manner as the artery. Then the wrist of the donor is brought into such proximity to the elbow of the recipient, so the tubes can be invaginated to the proper degree, the clamp is removed from the vein, its place being taken by the thumb and forefinger; the clamp controlling the artificial flow is now gradually released—coincidentally, the pressure on the vein is released—thus permitting the blood to go over gradually, so as to prevent any possibility of swamping or embarrassing the circulation of recipient by a sudden gush of blood under

great pressure. When the transfusion is finished, the tubes are removed, the vessels ligated and the wound sutured.

If you should have an emergency case and no liquid vaseline on hand, you can inject salt solution into your tube; or I prefer sodium citrate 1½% solution, which will decaleify the blood and prevent clotting in the tubes. In an emergency case, not having liquid vaseline on hand, I only used salt solution and transfused without any trouble.

As to the amount of blood transfused—Bernheim recommends to take the pulse rate and blood pressure of recipient every three minutes and of the donor every five minutes. His routine is to attempt to bring a pulse say 150 to 100 and to raise blood pressure of 50 or 70 up to 110 or 120.

Lilienthal prefers the hemoglobin estimation as an indication of how much blood to transfuse and has estimations taken every three to five minutes on the recipient during the flow and endeavors to raise the percentage somewhere near double its original point.

In severe hemorrhage I transfuse for about ten minutes, this amount being enough to overcome shock and yet does not weaken the donor to any appreciable degree. The donor's indication for ending transfusion is a sudden fall of 20 to 30 points in blood pressure.

In case acute dilatation occurs, Crile advises to stop transfusion at once, put patient in head-up position, give graded doses of nitro-glycerine to insure peripheral dilatation of vessels and digitalien in small doses to stimulate heart muscles directly. Small doses of morphine are also advised.

Another danger in this procedure is that of hemolysis. Bernheim reports having had two cases (one fatal) and finding little written on the subject from a practical

standpoint, decided to make a statistical study of the subject. To that end he sent out ten questions to surgeons, who had a large number of cases. He received twelve replies. In 800 transfusions, there occurred fifteen cases of microscopical hæmoglobinuria, an incident roughly of 2% with eleven recoveries and four deaths. In the eleven recoveries, tests were made in nine instances and hemolysis prognosticated. There were six fatalities from causes other than hemolysis; four from acute dilatation of the heart and two from questionable ana-Therefore, it is best to select phylaxis. a donor who belongs to the same iso-agglutinin group as the donee. This is discovered by testing the patient's serum against the corpuscles of the donor and also testing the donor's serum against the patient's corpuscles.

The test as described by W. L. Moss is carried on as follows:

A few drops of blood are collected from the ear or finger tips of the patient in a glass tube and allowed to coagulate in order to furnish serum. An additional drop or two is allowed to fall into a centrifugal tube containing a few c.c. of 1.5% sodium citrate in normal saline. The corpuscles thus obtained are washed in normal salt solution and then brought to approximately a 1% suspension in normal salt solution. In a similar way, serum and corpuscles are obtained from the prospective donors and the serum of each of the donors is tested for its agglutinating action against the corpuscles of the patient. If the serum and corpuscles do not agglutinate, the two individuals belong to the same iso-agglutinin group.

It is not necessary to test for iso-hemolysis, since it has been shown that iso-hemolysis, when present, follows the same laws which govern iso-agglutination.

OVARIAN CYSTS.*
Davis Forster, M. D.,
Hawkes Park, Fla.

The class of tumors which clinically are diagnosed as ovarian are found to grow from the structures of the oöphoron or egg-bearing portion, paroöphoron or vascular zone, parovarium or female epididymis. The ovary, almond-shaped, not entirely covered by peritoneum, hangs from the posterior surface of the broad ligament, into the pelvic cavity at each side of the uterus. The important part of the ovary physiologically is the oöphoron and is engaged in the production of Graafian follicles, the extrusion of ova therefrom, and the resulting corpora leutia with epithelium lining the same. The paroöphoron contains no follicles but is rich in blood vessels, and contains strands of fibrous and muscular tissue, and is situated between the folds of the mesovarium or broad ligament. The parovarium or female epididymis consists of a series of tubules varying from 5 to 17; and running therefrom toward the uterus is a fibrous, cord-like structure named Gartner's duct, analogous to the vas deferens in the male.

Thus we have tumors classified as retention cysts from Graafian follicles and cystic corpora lutea, while cysts from the parovarium epithelial tissue produce adenomata, pappillomata and adeno-carcinomata. Connective tissue produced tumors are cystic, fibroid or sarcomatous. We also find dermoid tumors as the result of fœtal maldevelopment.

Clinically, then, we meet with cysts from the oöphoron, the paroöphoron and the parovarium, the former occurring where inflammatory action causes a thickening in the wall of the Graafian follicle with a failure in the physiological rupture to release the ovum. The follicle goes on increasing in size, is unilocular, containing but a single cavity, thin walled, containing clear or blood-stained fluid. In some cases cysts are multiple and the entire ovary is converted into a mass resembling a bunch of grapes. The corpus lutea also produces cysts which are unilocular and the walls of which are thick and lined with the yellow folded tissue seen in normal corpora lutea, the cavity filled with disintegrated blood clots and bloody fluid.

Multilocular cysts with walls of connective tissue are thick and vascular with irregularities made up of masses of solid tissue or with walls that may be so thin as to rupture with exceeding ease. Often septum between cysts rupture showing several small cysts contributing to produce a single cavity. Tumors consist often of one or more large cysts surrounded by smaller ones projecting into the larger cavity and producing rounded surfaces on the outer surface of the tumor. Ouite frequently cysts are found growing between the layers of the broad ligament, some from the hilum of the ovary, and others take their origin from that part in which are contained the tubules of the parovarium, which latter while independent of the ovary proper are sufficiently intimately connected to prevent differentiation in an unopened abdomen.

Cystic tumors are attached to the broad ligament by the same structures as those that hold the normal ovary. As the tumor grows out of the pelvis these structures are pulled upon and stretched out and form a pedicle which may be long and slender or thick and short. In the oöphoron the fallopian tube remains curled up on the cyst, while in parovarian cysts the fallopian tube is stretched across the crown and the ovary stretched and spread out over the face of the tumor losing its natural characteristics.

The tissues of the broad ligament become hypertrophied or edematous and the veins dilated. The blood supply varies widely in different cases and often large vessels show in the surface of a tumor. The fluid in large cysts is generally thinner than in

^{*}Read before the forty-second annual meeting of the Florida Medical Association at DeLand, May 12-14, 1915.

smaller ones and may vary in different cavities of the same tumor. Fluids originate by direct secretion from the cells lining the cavity of cysts and by transudation of serum. Bloody fluids result from hemorrhagic process.

Cysts without a pedicle may grow behind the peritoneum lifting it off the posterior wall of the abdomen or behind the uterus may lift the peritoneum out of the cul de sac of Douglas.

Small cysts are usually discovered only by accident so there is but little chance to study them during the early stages. The first effect is to cause the ovary, from increased weight, to drop posteriorly into the pelvis. It grows in the direction of least resistance pushing the uterus forward, the intestines aside, and distending the mesial walls. Tumors sometimes become adherent or caught to the pelvic structures or are caught under the promontory of the sacrum and symptoms of incarceration result.

The size of the tumor bears no relation to the symptoms it will produce, as a patient with a tumor the size of a baseball freely movable, spent most of her time in bed till operated on complaining of nausea, frontal headache, pain in opposite ovary and general muscular weakness, while a patient applying for the first time stated she came because as she rolled over in bed that morning she felt as though a football was in her abdomen and operation showed a tumor of that size with no symptoms therefrom; while another patient expecting an immediate confinement was found with a tumor instead of a pregnancy reaching to the zyphoid tip and weighing 34 pounds.

A small tumor may occupy a lateral position but growing it follows the line of least resistance to the center of the pelvis and rises to the abdominal cavity. Displacement of the uterus may be forward or backward. Rising out of the pelvis the abdomen distends and pressure symptoms show themselves and respiration, circulation and digestion suffer.

Menstruation continues as long as normal tissue remains in either ovary, but patients often suffer at menstruation from intense pains of a congestive type from pressure within the capsule of the ovary, or pain may be present in ovary of opposite side. In large tumors amenorrhoea may be the result of loss of general health. Patients with one-sided cystic tumors are often sterile or give birth to children of one sex; for instance, a woman from whom a large cystic tumor was removed was the mother of six girls.

Tumors carried for years cause an absorption of the general fat of the whole body with characteristic emaciation. In former times the peculiar facial expression, known as "Facies Ovarica," was considered a necessary accompaniment of ovarian cyst, but earlier operations have to an extent eliminated the importance of this symptom. Ovarian cases do, however, wear a peculiar dragged-out and worried expression which is of value to the observer. There is often present a characteristic neurotic condition which is, however, entirely absent in other cases.

Pressure on the bladder or rectum may cause difficult defecation with tenesmus or frequent and painful urination. Tumors do not press on the urethra sufficiently to cause retention as a fibroid sometimes does. Interligamentous cysts may press upon one ureter interfering with function of the kidney, causing uremic symptoms.

Ascites is present with pappillary cysts with vegetations on the peritoneum and in glandular cysts where there is blocking of the large abdominal veins. Ascites can be noted by the bulging of fluid in flanks when the patient lies on the back, with dull percussion note over fluid. Dullness over tumor, if present, resonant at umbilicus, if absent. Adhesions come as a later complication and are produced when friction has denuded the tumor and formed a fibrous exudate between opposing surfaces. A point of interest here is that when the peritoneum of the wall becomes aggluti-

nated with the tumor one peals the peritoneum while freeing the cyst. Uterine and intestinal adhesions are usually easily broken up. The tumor becomes acutely inflamed when infection is introduced through the lymphatics and blood vessels of the pedicle and may turn the whole structure into an immense abscess cavity. This may occur from injury following labor.

Gravity and muscular contraction may cause tortion of tumor; slow shutting off of nutrition causes atrophy while more sudden action will predispose to sepsis and gangrene.

The cases of rupture of cysts which have come under my observation have been in clinic during examination by students and have been followed after an anxious waiting period by absorbtion of the fluid and no untoward results, due doubtless to the benign character of the growth. However, the freeing of fluid containing pappillary masses would undoubtedly cause a general infection of the cavity.

Pregnancy may be complicated by a cyst and go to term uninterrupted unless the cyst gets into position to interfere mechanically. In a case which I had under observation for future delivery, but had not detected the presence of a cyst, the patient fell downstairs and reported to the hospital feeling generally ill. I found a five-month pregnant uterus and impacted behind it a cystic tumor filling the cul de sac and pressing upon the posterior vaginal wall. It could not be elevated with fingers in the vagina. After consultation it was decided to open through the vagina back of the uterus into the peritoneal cavity and, at least, withdraw the fluid for the relief of symptoms. On opening the cyst presented and was grasped with two hemostats and punctured with a knife evacuating fluid into the vagina. The wall of the tumor was pulled into the vagina by repeated applica-tion of hemostats higher up, the pedicle clamped and the cyst wall cut away, leaving a clamp on the pedicle for 48 hours after

which it was removed and the posterior wall allowed to close. Patient left the hospital in good condition returning at term for a normal delivery, which was uneventful. This procedure we would consider an exception rather than the rule, for all things equal much more satisfactory results can be obtained by abdominal section while the vaginal route carries the dangers of infection and is impeded by the restricted field.

In distinguishing between a normal pregnancy and a cyst the various well-known signs of pregnancy are a help, but the way to certainty lies in bimanual examination, outlining the uterus distinctly between the two hands and distinct from the tumor. A case in point may help to illustrate. A lady, aged 28, married two years, presented herself, stating that her abdomen was gradually enlarging, but creating no symptoms, expressing her hope of maternity. Examination showed a normal-sized uterus and a cystic tumor of about the size of a six-month pregnancy. The uterus, however, could be outlined distinct from the tumor. Operation was arranged for and the patient prepared. At the operating-room door a nervous nurse called the operator aside and whispered that the patient was having intermittent abdominal contractions every fifteen minutes. Were it not for the surety that the uterus had been outlined this would have delayed procedure, but it was with a great deal of relief when the pearly grey cyst wall was seen presenting through the line of the incision.

When the cyst has grown up into the abdominal cavity the intestines are pushed aside and upwards so that there is an area of dullness over the tumor from the pelvis up, surrounded by a tympanitic area representing the intestines filled with gas. If the tympanitic zone extends below the tumor it is not of ovarian origin, if ascites is present resonance may be absent unless the patient is turned from side to side. In large tumors a wave may be felt traveling across the abdomen.

The treatment consists of removal by a

median abdominal section, ligating the pedicle and covering the raw surfaces with peritoneum.

INFLUENZA.* A. R. Bond, M. D., Tampa, Fla.

Influenza is defined as an acute infectious disease, characterized by fever, catarrhal irritation of any or all of the nucous tracts: especially the respiratory tract and by muscular pains and great prostration of the patient.

There is today amongst the medical profession entirely too much carelessness in the application of the word, "grippe." Commonly when a person is said to have "grippe" it means that he has a bad cold in the head, with more or less catarrh of the head. This has become so common a diagnosis with the medical fraternity that the laity have become experts in diagnosing and treating their supposed cases of grippe, and fail to realize the seriousness of the disease. The most practical classification, to my mind, of the varieties of influenza, is given in "Tyson's Practice of Medicine."

First: We have the "endemic influenza nostras," pseudo-influenza or catarrhal fever, a special disease of unknown etiology, bearing the same relation to true influenza as does cholera nostras to Asiatic cholera.

Second: We have the "epidemic influenza vera," or the true influenza, caused by the Bacillus Pfeiffers.

Third: We have the "endemic influenza vera," which often develops for several years in succession after an epidemic, and is caused by the Pfeiffers bacillus. This will bear out the assertion that we have influenza carriers, as we have in typhoid.

Quoting from an article in a recent number of *The Journal of the A. M. A.*, by Dr. George Mathers of the Memorial Institute for Infectious Diseases of Chicago on the etiology of the current epidemic of influenza

now prevalent in that city. He calls the attention of the medical fraternity to the fact that there is little definitely known concerning the etiologic factors causing the present epidemic. The various organisms, such as the bacillus influenza, micrococcus catarrhalis, and the pneumococcus have been described in connection with this epidemic, as the infecting organism, but the evidence in each instance is inconclusive, and the etiology remains more or less problematic. Mathers states that before specific measures, either prophylactic or of a curative nature can be developed, the real causative agent must be determined which will necessitate a careful bacteriologic examination of the mucous secretion from the infective air passages which unfortunately under normal conditions often harbor other virulent bacteria. The question is raised by Mathers as to whether we have a new organism. having a special affinity for these tissues, or do these diseases represent new pathogenic characters that have been acquired by a normal bacterial inhabitant of the respiratory tract. In making his report on the bacteriologic findings in a series of twentyfour cases, he finds that in seventeen of these cases a hemolytic streptococcus to be the predominating organism. These strains examined culturally presented all the characteristics of the streptococcus pyogenes. He also found the pneumococcus and the streptococcus aureus in all these cultures, and draws this conclusion: Since pneumococcus and the streptococcus aureus are inhabitants of the normal mouth, and that the hemolytic streptococcus are uncommon in infections of this nature, except in tonsilitis, these results are suggestive. That the striking frequency with which a hemolytic streptococcus has been isolated in the acute stages of this infection, would indicate that this organism may be of primary importance in the etiology of the current epidemic of influenza that is now so rapidly spreading over the country. He states that these preliminary findings emphasize the impor-

^{*}Read before the Hillsboro County Medical Society at Tampa, January, 1916.

tance of careful bacteriologic examinations in this disease before the usual diagnosis of grippe or influenza is justifiable, for it is a striking fact that the diagnosis of influenza is not always confirmed by the bacteriologic findings (such has been the case in this epidemic now prevailing in Chicago), and that in none of his examinations did he find the Influenza or Micrococcus catarrhalis bacilli. The Baccillus influenza are to be found in numerous numbers in the nasal and bronchial secretions in a true epidemic and through these secretions is the disease conveved to others. This establishing the fact that it is a contagious disease, and the further fact of its contagious nature is sustained by it only traveling as fast as people travel, even contrary to the directions of the prevailing winds.

It has a period of incubation of two to three days or longer, its mode of onset is not the same in all cases. The attack may be ushered in by a chill or chilly sensation, and most frequently there are coryza and sneezing, with or without watering of the eyes, to be followed with cough and copious expectorations.

A typical clinical case presents this picture: The patient in usual health, suddenly commences to feel badly all over, chilly sensations along the back, aching pains from head to feet, slight congestion of the throat, anorexia, general malaise, goes to bed within a few hours, and sends for the physician, who obtains the above history. Examination discloses a coated tongue, fetid breath, congested throat, temperature of 102° to 104° F. Facial expression of the patient indicates pain over the entire body, but more especially in the head and back. The principal seat of the pain is in the lumbar spine. I have frequently noted cutaneous hyperthesia.

The pulse is small, feeble, irregular and often intermittent, and sometimes unusually slow. The depressing effect of the toxemia upon the heart often reaches a dangerous degree.

Clinical types of influenza have been described based on the differences in the local manifestations and the varying degrees of toxemia.

The principal types are the (a) respiratory, (b) gastro-intestinal, (c) cardiac, and (d) typhoid or nervous. Others not so frequent are the rheumatoid, apvretic, and ambulatory. The symptoms varying according to the various types of the disease with which all are familiar, and I will not take up the time in discussing the various types and their individual symptoms, but wish to discuss more fully some of the most frequent and serious complications and sequlæ. First we will take up the pulmonary complications as I consider them the most serious. Severe bronchitis, particularly affecting the capillary tubes and leading to bronchopneumonia, is a common and a very serious complication.

Lobar pneumonia is also a frequent and a very fatal complication. Sir Douglas Powell says that pneumonia in influenza is always caused by the pneumococcus, and yet many others, equally as prominent, claim that the bacillus influenza may itself cause pneumonia of the lobular type, or at least that it does enormously increase the susceptibility of the individual to infection by the diplococcus.

Arneth reports forty-two cases of pneumonia, with the bacilli influenza in the sputum or evidence of influenza infection. In 65 per cent of these cases more than one of the lobes were involved, and in 32 per cent the penumonia was crossed. Pleurisy might be mentioned as another complication met with in this disease.

Holt says that recurrent attacks of pertussus are nothing more than prolonged cases of influenza in many instances. Influenza may exist for a period of six to eight weeks: It may be characterized by a paroxysmal cough, which is so like the paroxysm of whooping cough that at times the two are indistinguishable.

The Bacilli of Pfeiffers has many points

of resemblance to that of Bordet's bacillus. Another point of resemblance is the contagious nature of influenza, and the fact that there may be two or three children in the same family with identical symptoms. Holt says that we should be extremely cautious in making our diagnosis of recurring attacks of whooping cough when we have an epidemic or endemic of influenza existing.

Otitis media constitutes one of the serious complications that we may have following an attack of influenza. Also we might mention conjunctivitis, keratitis and acute glaucoma as occasional complications. Some types of influenza have such a wide range of temperature that it may suggest an involvement of the mastoid or the presence of a sinus thrombosis. important to remember that a single blood count, taken in connection with the high and widely fluctuating temperature, should not be relied upon for guidance as to the advisability of an operation upon the mastoid when there is influenzal otitis media, and only when local signs in the ear canal and tenderness over the mastoid area with a temperature curve showing a rapid rise and fall and a blood examination showing living steptococcus, should the operation for mastoiditis be advised. Besides the catarrhal symptoms of the respiratory or gastro-intestinal tract, a frequent manifestation of the disease, is the involvement of the lymph nodes of the neck. Just as long as these glands remain soft there is danger of another outbreak of the fever, and we should be cautious about our prognosis.

It, no doubt, is often difficult to show that many affections owe their origin to some previous attack of influenza, though they may be apparently connected; yet it is reasonable to presume when these present certain features in common, and were seldom seen previous to the attack of influenza, and have since followed them quite commonly, that their connection with influenza is one of cause and effect.

It is also very often difficult to show the association of some of the lung affections with the Pfeiffers bacillus, unless it is in the early catarrhal stages. sequent lung complications when they develop are usually dependent upon some other organism, such as the tubercle bacillus or the pneumococcus. The depressing influence of the influenza bacillus is merely preparing the soil suitable for the other organisms to thrive in, and developing latent into active disease, and making light forms of organic affections more serious. This may be particularly noted in diseases of the heart and kidneys. A mild form of albuminuria with no other symptoms may become, after an attack of influenza, an incurable and rapidly fatal Bright's disease, and a mild cardiac affection scarcely noticeable by its symptoms may become a grave illness with degeneration of the muscular substances and dilation of the heart cavities. There are many other complications that we might discuss, such as meningitis, encephalitis, neuritis and more especially optic neuritis; in fact almost every form of nervous disease. There is no disease in medicine in which the sequelæ and complications are of more importance, and especially so in the aged. We can never tell just what organ or organs of the body will be left permanently damaged. We so often have our patients state that they have never felt right, or such and such a condition has developed since their attack of the "grippe" so many months ago. This is important, and we should be more careful in treating this troublesome disease if we desire to prevent these dangerous sequelæ. It can be accomplished if we are careful in our diagnosis, management and treatment of our cases.

This now brings us to the consideration of the treatment. The infectious nature of this disease and its tendency to endemic

occurrences gives to the prophylactic treatment a greater degree of importance than has generally been bestowed upon it. The secretions from the nasal and respiratory tract are the main sources of the infecting organism and should be rendered sterile as much as possible by the use of antiseptic solutions in the form of sprays and gargles. The care of the sputum of these patients should be practically the same as that of the tubercular. The germs are ejected in the little droplets or bubbles of mucus or saliva while the patient is talking or coughing. I find that a fifty-percent solution of peroxide or a ten- to twenty-five-percent solution of alcohol as a gargle and the use of Dobell's solution in the spray to the nose will prove very efficient in these cases.

There being no specific remedy for the treatment of influenza, the management of the case is simply hygienic and symptomatical. No matter how mild a case may be, the patient should be put to bed and kept there until convalescense has been fairly established. My routine treatment of these cases consists in putting the patient to bed, giving 1/4-grain doses of mild chloride with one grain of sodium bicarbonate every half hour for six to eight doses, followed by a saline cathartic, ice caps or cold applications to the head and sponge baths with an alcohol rub. Then the following capsule is given every three hours for two or three days or until the patient is comfortable:

R Acetphenetidinigrs.	ii
Phenyl salicylategrs.	ii
Caffeine citrategr.	i
Pulv. ipecæ et opiigr.	i

The analgesic, antifebrile and antiseptic properties of this combination seem to be sufficient to control the symptoms and give relief to the patient, and possibly affect a cure. Most of my patients have promptly yielded to this treatment, together with rest, proper care and suitable liquid diet.

The strength of the patient should be sustained by the use of tonics and stimulants when depression makes itself manifest.

Strychnia and quinine in small doses are the best and most desirable remedies that we have. I would mention whiskey in this connection only to condemn it. I would only consent to prescribe it for such patients that have been in the habit of taking whiskey at regular intervals. Quinine has seemed to me especially advisable where the catarrhal symptoms are prominent. I generally prescribe it in six to eight grains a day which seems to control all symptoms. Overmedication is to be avoided.

I have used the vaccine treatment in a few cases, seemingly with some favorable results, but my experience with this line of treatment is not sufficient to warrant an opinion. This is one disease in which before giving the vaccines we should be positive of our diagnosis.

The treatment of the special symptoms arising in the different types of the disease must vary in accordance with the manifestations in each instance.

The after-treatment of the disease is often as difficult as the management of the acute stages. Close study of the individual needs of the patient is of prime importance, as few diseases leave in their wake such prostration as is common after an attack of the grippe.

IMPERFORATE ANUS.*

E. T. Campbell, M. D., Starke, Fla.

You will pardon me if I briefly refresh your memory on the formation of the embryo.

We find after impregnation that the ovum forms a membrane of blastodermic cells. This in turn separates into three membranes, named from without inward—ectoderm, mezoderm and entoderm. Of the three layers thus described the ectoderm forms the skin and appendages.

The entoderm forms the mucous and serous membranes, and all the other struc-

^{*}Read before the Bradford County Medical Society at Lake Butler, April 1, 1915.

tures of the body are formed from the mezodermic layer.

We find that the cerebral and spinal cavities are formed by the gradual projection of a ridge on either side of a central line through the germinal disc, of the mezodermic layer until it meets its fellow and unites, forming a cerebro-spinal cavity lined by the entodermic layer. Into this cavity, by means of a budding process, the brain and spinal cord are projected from the mezoderm, pushing the entoderm before it and thus covering the contents of the canal with entoderm.

In a similar manner the thoracic buccal and abdominal cavities are formed and we find the nose, middle ear, mouth, chest and abdomen lined with entodermic membrane.

The organs are, in a way, budded into these cavities from the mezoderm. In an early period (14th week) we find that the mezoblastic layer has not yet completed the closing of the face, nor of the genito rectal cleft but at the oral and anal extremities the ectoderm and entoderm have united.

Later, when all progresses normally, the face closed in the anterior median line with the entoderm, represented by the mucous membrane, coming to the borders of the nares and lips.

At the other extremity we find, in normal cases, the union to be complete with the formation of the vagina and rectum lined with mucous membrane and uniting with the ectoderm around the anal and vaginal orifices.

In the male we find a further closing up and a distinct line of union or rugi extending from the anus to the glans penis.

On February 18, 1915, I attended Mrs. R., in normal labor, terminating in the birth of a male child, normal except that there was no pervious anal orifice.

On close examination I found that the closing of the genital cleft had been too complete and that the rugi extended completely across the anus. Just over the anal

site I noticed a slight bulging, the size of a grain of wheat, which I incised with a resulting escape of gas. I then dilated with bouges and there resulted a free passage of meconium.

I have taken some time in my preamble, as the case is exceedingly rare and I thought a consideration of the cause of the anomaly might not be amiss.

PROPAGANDA FOR REFORM.

COLLOIDINE.—Colloidine (Boracol Chemical Co., agents) is claimed to be "A Colloidal Vegetable Iodine Combination," each tablet of which is stated to represent 1-3 grain iodin. Because of the colloidal character of the iodin compound, Colloidine is claimed to be an especially efficacious iodin preparation. The Council on Pharmacy and Chemistry reports that Colloidine is ineligible for New and Nonofficial Remedies because, as shown by examination in the A. M. A. Chemical Laboratory, the iodin was deficient in amount and in a form of an iodid or in a form which so readily yields iodid that the therapeutic effects of Colloidine would seem to be those of iodids; and because the therapeutic claims were unwarranted. (Jour. A. M. A., March 11, 1916, p. 831.)

Hexamethylenamin and Uric Acid.— If further evidence were necessary to show the futility of administering formaldehyd derivatives like hexamethylenamin as uric acid solvents, it could be found in the observations recorded by Haskins under the auspices of the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry. While the administration of excessive doses may produce slight solvent action, Haskins points out that the required dose of hexamethylenamin is too large and an equal or better effect can be produced more readily by administration of alkaline diuretics or sodium bicarbonate in reasonable quantities. (Jour. A. M. A., March 25, 1916, p. 962.)

EMETIC ACTION OF DRUGS.—The investigation of R. A. Hatcher and C. Eggleston show that the nauseant and emetic action of many drugs is not due to their effects on the stomach, but to a central action on the "vomiting center." Practically all alkaloids and alkaioidal drugs which have emetic properties, including morphin and preparations containing it, emetin, cephælin, quinin, nicotin, lobelin, pilocarpin, aconite and veratrin, ergot and apomorphin, which produce nausea or vomiting as their chief or side actions, do so by direct effect on the vomiting center. Sodium salicylate picrotoxin and digitalis also produce vomiting through central action. These investigations show the futility of the many devices which have been employed in attempts to avoid the nausea or emesia produced by many drugs as an undesired side-effect. (Jour. A. M. A., March 11, 1916, p. 817.)

ALARMING SYMPTOMS CAUSED BY DIAR-SENOL.—Diarsenol is made by the Synthetic Drug Company of Toronto, Canada. It is stated to be chemically identical with salvarsan. A. H. Cook, Hot Springs, Ark., reports that he has administered fourteen intravenous injection of Diarsenol. Eleven consecutive doses were without untoward effect or phenomena differing from those attending the intravenous administration of salvarsan. The three subsequent doses produced alarming symptoms, which Dr. Cook never observed from the use of salvarsan or neosalvarsan. (Jour. A. M. A., March 18, 1916, p. 865.)

CLINICAL REPORT ON ARSENOBENZOL.—
"Arsenobenzol" is being made by the Dermatological Research Laboratories of the Philadelphia Polyclinic. It is stated to be chemically identical with salvarsan. O. S. Ormsby and J. H. Mitchell report a series of 184 injections given to seventy-five patients suffering with syphilis in its various stages. They report that the action of this drug has been uniform, its toxicity low, and its therapeutic results excellent. (Jour. A. M. A., March 18, 1916, p. 867.)

Endorse the Council on Pharmacy AND CHEMISTRY.—The following resolution was presented at the San Francisco meeting of the A. M. A. and signed by all the members of the house of delegates in attendance: "Resolved, We, Members of the House of Delegates of the American Medical Association believe that every effort must be made to do away with the evils which result from the exploitation of the sick for the sake of gain. Earnestly believing that the continued toleration of secret, semisecret, unscientific or untruthfully advertised proprietary medicines is an evil that is inimical to medical progress and to the best interest of the public we declare ourselves in sympathy with, endorse and by our best efforts will further the work which has been and is being done by the Council on Pharmacy and Chemistry of the American Medical Association in the attempt to eliminate this evil." (Jour. A. M. A., March 18, 1916, p. 910.)

THE REQUIREMENTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY. — New and Nonofficial Remedies contains the rules which govern the Council in the admission of remedies to this book. These rules merely require that the composition of a remedy be nonsecret, that its uniformity be safeguarded, that no false claims be made regarding its therapeutic properties and that its use shall be at least based on a probability of therapeutic merit. A simple way of determining if a certain preparation complies with the Council's rules, is to see if it is described in New and Nonofficial Remedies. (Jour. A. M. A., March 18, 1916, p. 913.)

LARKSPUR FOR PEDICULOSIS CAPITIS. — Various formulas for tincture of larkspur for use against pediculosis capitis have been published, but larkspur is poisonous and harm may result where there are abrasions of the skin. Many prefer kerosene. It is applied under a suitable cap. After twenty-four hours the hair is combed to remove nits and then washed. (Jour. A. M. A., March 18, 1916, p. 913).

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Next Meeting — Arcadia — May 10-12, 1916

THE ARCADIA MEETING.

The forty-third annual meeting of the Florida Medical Association will convene in Arcadia on the morning of May 10th and will remain in session for three days.

A perusal of the preliminary program published in our last issue will show in no uncertain manner that all those who can and will lay aside their professional duties and attend this session will be amply repaid. We believe that the Scientific Committee has prepared the best program ever presented at a meeting of our association. The Committee on Arrangements have been untiring in their efforts to make this meeting the most successful in the history of the organization.

The State Board of Health has arranged for their Health Exhibit Train to be in Arcadia during the meeting. This exhibit will be a great auxiliary to the State Board of Health in carrying on their campaign for a healthy populace, and those members of the medical profession attending the meeting should welcome this opportunity to inspect the exhibit. The Committee on Arrangements have provided for the entertainment of all members and visiting ladies, and it is safe to say that there will be something doing every hour during the day and for all who wish it, even beyond the day.

STATISTICS OF STATE BOARD EXAMINATIONS.

The Journal of the American Medical Association publishes, April 8th, for the thirteenth consecutive year, tabulated statistics based on official reports of examinations conducted by state medical licensing boards. There is a table showing in what states certain colleges are not recognized, which has an important bearing on the statistics published. Reports have been received from all state boards, making the statistics complete. "In 1903, when the publication of these data began," says The Journal, "reports could not be secured from the majority of boards because careful and

adequate records of the examinations had not been kept."

There are tables giving valuable information in regard to medical licensure in each state. Tables A and B show the number of candidates who appeared for examination, the colleges from which they graduated, the results of their examination, the total number registered, and the total number and percentages of those rejected. This table permits comparison of the totals and the percentages of one state with those of other states. If a state board's examinations are unusually lenient for graduates of medical schools located in that state as compared with the results for the same colleges in other states—which appears to be true in some instances—the fact is shown in Table G. If a state harbors a low-grade medical college, the figures show that the people of that state are the greatest sufferers from the maintenance of the college. To decide whether or not a low percentage of rejections means "leniency," the reader should note in Table D whether the board has refused to examine graduates of lowgrade colleges. If so, a low failure percentage is to be expected. If, on the other hand, a board admits graduates of any and all schools, or perhaps also non-graduates, high failure percentage would be expected. If, in the latter instance, there is a low failure percentage, then "leniency" is perhaps too mild a term.

The total number of candidates examined by each board in the last five years and the percentage of rejections are shown in Table H. This permits comparison of the figures of the last year with those of the four previous years, and also the figures of one state with those of the others. Table I shows the totals registered by all methods, by examination, by reciprocity and under exemption clauses. This table also shows the number of nongraduates licensed. Table J gives the number of candidates licensed through reciprocity, and shows what states granted the original li-

censes. Table K gives the total number of physicians who left each state during the last five years and registered in other states through reciprocity. Table L gives the thirty-one states which have adopted higher standards of preliminary education and the dates when the higher requirements are effective. Table M shows the progress in state board requirements during the last ten years, and Table N gives a summary of the essential features of medical practice laws. On the whole, these statistics call attention to the kind of protection the people of each state have against incompetent or ill-trained physicians.

TOTAL REGISTRATION IN ALL STATES.

These statistics show the number of candidates coming not only from each medical school in this country, but also from Canadian and other foreign medical colleges. They give an accurate record of the number and source of the men who are entering the practice of medicine each year in this country. They show that 5,872 physicians were licensed in this country during 1915; 75 more than in 1914.

"These statistics have had a much greater effect, however, than that rendered by a mere numerical report of physicians examined," says *The Journal*. "In many states splendid systems of record-keeping are now to be found where formerly no records whatever were kept, or where the systems were far from perfect. They have also furnished abundant argument for practical tests in state license examinations and have undoubtedly had much to do with the improved character of these examinations.

"The publication of these statistics has had a marked influence on medical colleges. Whereas previously medical faculties were unaware of the weakness in their methods of teaching, these statistics now show how frequently graduates fail at the state license examinations. The colleges have made marked improvement in their equipment, and better teachers have been secured and better methods adopted.

CO-OPERATION MUTUALLY ADVANTAGEOUS.

"These statistics have their greatest value when studied in connection with other data collected by the Council on Medical Education and published in The Journal and in the Council's reports. The state board statistics are made accurate and reliable through data furnished by medical colleges: they are based on reports received direct from state boards; through a careful checking of those reports, errors are frequently corrected, the state boards are notified and in this way state records are also made more accurate. The statistics published this week, therefore, have been made possible only through the cordial co-operation of both the state boards and the medical colleges, and for this cooperation we again express our acknowledgments."

RECENT STUDIES OF DIPHTHERIA CARRIERS.

"The part which healthy carriers of diphtheria bacilli play in the spread of diphtheria has furnished a subject for much study and discussion. Numerous investigators have found culturally and morphologically," says *The Journal of the American Medical Association*, "typical diphtheria bacilli in the throat and nose of from 1 to 4 per cent of healthy persons. Zingher and Soletsky refer to Wilcox and Taylor as finding 4.5 per cent of carriers among the scarlet fever patients admitted to the Willard Parker Hospital, and in one half, the bacteria were virulent.

"While diphtheria bacilli cultivated in cases of clinical diphtheria are practically always virulent, those grown from carriers are often nonvirulent. The general opinion of those who have studied the subject is that the avirulent diphtheria bacilli are harmless, that they never change into the virulent form, and that carriers of such organisms are not a source of danger. Many carriers of diphtheria bacilli rid themselves of the organisms in a short time, and it is only the

persistent ones which are finally of most interest. Ruh, Miller and Perkins define a carrier as a person who harbors virulent diphtheria bacilli for a period of twenty-one days or more. While this limit is arbitrary, it establishes a time beyond which it is reasonable to undertake to determine whether a person who has become a persistent carrier harbors virulent bacilli or only harmless avirulent ones in order that needless isolation and restrictions may be avoided. This can be accomplished in an inexpensive manner by employing the technic of Van Riemsdijk or Zingher and Soletsky. In each case two guinea-pigs are used, one for the tests, and one, which has previously received diphtheria antitoxin, as a control. Both pigs are inoculated intractaneously with the culture to be tested. Van Riemsdijk introduces some of the culture on Loeffler's serum by means of a sharp, flat-pointed needle, while Zingher and Soletsky inject a suspension of the bacteria with a syringe. In each case virulent diphtheria bacilli cause a reaction at the point of inoculation in the test pig which is absent in the control. Two guineapigs can be used for testing from four to six cultures. After it has been determined which individuals are carriers of virulent bacilli and consequently a source of danger to others, the practical question arises as how to get rid of the bacteria. In trying to solve this problem a great number of antiseptic agents have been employed with the purpose of killing the bacteria. The latest addition to the list is iodized phenol, advocated by Ott and Roy. Hektoen and Rappaport advised the local use of kaolin to remove the bacilli mechanically from the nose and throat, and the recent report by Rappaport appears to show that the disappearance of bacilli can be hastened in this manner.

"No local measure has proved entirely satisfactory, a few cases always remaining in which the bacilli persists in spite of the treatment. A careful examination in such cases usually discloses some local condition

which allows the bacteria to live and grow and which prevents their being reached by any application. The most common condition of this sort is one in which there are deep pockets in the tonsils which are more or less enlarged and visibly diseased. Cultures from the throats in such cases often fail to contain diphtheria bacilli unless care is taken to secure materials from the depth of the tonsillar crypts. Friedberg has removed the tonsils in such cases with satisfactory results, the cultures becoming negative at once or very shortly. Similar favorable results from tonsillectomy have been reported by Ruh, Miller and Perkins. In the eighteen cases reported by them, positive cultures had been obtained over a period of thirty-one days on an average, in one over 120 days. Following the tonsillectomy, negative cultures were secured after seven days on an average, in several as early as the third day. There seem to be no contraindications to the operation aside from those obtaining in other conditions. Carriers of diphtheria bacilli are always immune to diphtheria, and in any case the presence of immunity can readily be determined by means of the Schick test.

"Local conditions in the nose and throat other than those in the tonsils may determine the persistence of bacilli, and should be sought in the individual case, and removed or relieved whenever possible. It seems likely that the employment of local measures of this sort will serve the very useful purpose of getting rid of a large number of persistent carriers which have heretofore been subject to various forms of local treatment without benefit."

INCREASED MEDICAL STAFF IN THE ARMY.

"The House, debating the bill for the reorganization of the army, brought before it by the House military committee, has adopted an amendment granting a provi-

sion asked for by the surgeon-general of the army providing for seven medical officers per thousand of line troops. Such a step is an advance in medical organization. It is in response to the achievements of military hygiene and to the appreciation, by the public at large, of the economic value of sanitation to which it has been educated within the last decade. The work of the Dodge commission, which investigated the conduct of the war with Spain. still bears fruit. The reorganization of the Medical Department in 1908 was based largely on the results of this report, and the provision affecting the personnel also finds its warrant in this report. The determination of the strength of the personnel on a percentage basis is eminently a correct one, and in any increase in the army which might occur, automatically carries with it a proportionate increase in the Medical Corps. Even the pacifist can have no objection to the increase of the scientific and noncombatant corps, charged, as it is, with the conservation of human life in the army; the militarist and economist certainly should welcome any agency which conserves the physical well-being of the trained soldier. That an efficient and sufficient Medical Department can do this, and does do this, is being demonstrated today in Europe. Indeed, it is a question whether any people as intelligent as those of the United States would again tolerate, even for a few brief weeks, the conditions which prevailed in the mobilization camps in the United States during the Spanish War. The sanitary era has arrived," says The Journal of the American Medical Association, "and the action of the military committee is merely recognition which has arrived in the army. as well as in civil life. This is something in which the medical profession of the country at large is vitally interested. believes that the lessons of the Spanish War should be fully considered in any reorganization of the army."

Cancer Department

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

CANCER OF THE SKIN.

During the ten years ending with 1909, out of every 100,000 deaths in the United States, 918 were due to cancer of the skin. Two per cent of all skin diseases are cancerous. This state of affairs is certainly susceptible of vast improvement, as a result of the concientious efforts of the whole profession to recognize and remove precancerous lesions of the skin; and to teach their patients the doctrine of early removal of suspicious lesions.

Cancer here as elsewhere never begins in a healthy area of skin, but has as a warning of its approach one of the precancerous lesions, which is usually present for quite sufficient time to give ample time for its recognition, and removal. The skin, being in plain view, offers unusual advantages for frequent inspection of a suspicious area; and unusual opportunities for the safe, simple, easy, complete, and inexpensive removal of its potential cancers; therefore every death from cancer of the skin is a monument to carelessness or procrastination on the part of the physician or the patient, or both.

Some of the usual precursors of cancer of the skin are:

- 1. Pigmental moles, the kind which are deeply pigmented, and slightly raised above the surface of the skin. These are especially dangerous if they occupy an area which is constantly irritated by the clothing, shaving, etc.
- 2. The dark, dirty-looking warty growths of the exposed surfaces of the skin of those past middle life. These are the so-called senile warts, about five per cent of which become cancerous.
- 3. Small lumps in or just under the skin, remaining over a long time, are frequently beginning cancers. They are at least never

normal, and act as an outstanding invitation to cancerous development.

4. Unhealed ulcers, which have persistently resisted the ordinary treatment for a few weeks, with the exception of varicose and syphilitic ulcers, should be looked upon as possible grave enemies to their hosts, and should be gotten rid of at once.

These and other localized areas of chronic skin lesions are so very apparent, so easy of complete and painless removal by the knife, under local anæsthesia, and so frequently the sites upon which cancer later developes, that the physician is untrue to his patient and himself, who does not take a definite stand in urging their removal in the early, precancerous stage.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTION.

Health subjects are coming into their own in the counsels of social workers. The revised program has just been issued for the forty-third annual meeting of the National Conference of Charities and Correction which is to occur at Indianapolis May 10-17. It begins with an address by Ernest P. Bicknell of Washington, D. C., on measures adopted by the Red Cross and other agencies in warring countries and contains a dozen section meetings on health questions. These include health insurance, venereal diseases, mobilizing against alcoholism, industrial hygiene, medical social work, physical care of school children, research work in public institutions, oral hygiene, the function of the psychopathic hospital, and the relationships of physical well being to efficiency and to heredity.

Dr. J. N. Hurty of the Indiana State Board of Health is chairman of the division on health and speakers are drawn from all parts of the country. It is likely there will be a special social function for medical men in attendance upon the conference. The organization brings together about 2,500 men and women engaged in practical social work, voluntary and public, in the United States and Canada.

Reviews from Current Literature

FRACTURES OF THE ELBOW

Neuhof, Harold, and Wolf, H. F.: The End Results of Treatment of One Hundred Cases of Fracture of the Elbow. Surg., Gyn. and Obs., 1915, Vol. XX, p. 295.

The writers report one hundred cases of elbow fracture treated in the Mt. Sinai Hospital and Dispensary. They classify the results obtained as "perfect," meaning the ultimate complete and normal range of motion in the elbow joint, and "imperfect" as any variation from normal motion or function. Before elbow fractures were put up in the Jones position, namely, hyperflexion, perfect results were not obtained in more than 25 per cent of cases, and serious impairment of motion and function was the rule. Immobilization in hyperflexion materially increased the percentage of perfect results, and the writers believe that a still greater number of perfect cures may be obtained by adding early mobilization and massage to the early fixation in the Jones position. They state that the patients in which perfect results were obtained were referred for mobilization and massage at periods averaging 12.8 days after fracture, and that patients discharged with an imperfect result were mobilized and massaged at periods averaging 32.1 days after fracture. They argue, therefore, that early passive motion and massage are important factors in the treatment.

The writers emphasize the necessity of accurate reduction, under anæsthesia when necessary, of the displaced bone, and the proving of the reduction by radiographs. The arm is then put up in hyperflexion, and "hyperflexion does not mean merely acute flexion; it is the most acute flexion in which the elbow can be fixed without obliterating the radial pulse."

Early movement and massage prevent joint stiffness, whether due to muscular atrophy, capsular changes or misplaced bone fragments.

The important principle in early movement and massage is that the treatment must always be painless. "The significance of this is readily grasped; well set fragments can not be displaced without causing pain."

(My own general rule is to take down every case of elbow fracture for painiess passive motion not later than the seventh day and every day thereafter.—R. C. T.)

Pain from muscular spasm will often appear in children and nervous adults, as soon as the bandage is loosened, but will disappear if the patient is mentally soothed and reassured, and the local spasm relaxed by gentle massage.

After each daily mobilization the arm is again bandaged in hyperflexion. The bandage is rarely necessary after three weeks, though in children some immobilization may be needed for a longer time on account of the danger of a refracture through play or carelessness.

R. C. T.

CAESARIAN SECTION

Boyd, George M.: The Indications for Casarean Section. Am. J. Obst., Vol. LXXIII, 1916, p. ——.

Due to the improvement in surgical procedures the mortality of Cæsarean section has become very low in comparison with the high death rate of some years ago. The indications for the operation have been inordinately broadened and many feel that the operation is performed much too frequently. Boyd believes that the pendulum has swung from the point of high conservatism, due to high mortality, to that of great freedom in operating, but expects to see it

swing back in the very near future to that position where time and experience should justly place it.

The most frequent indication for the operation is pelvic deformity, contraction to 6.5 cm. or 7 cm. in the true conjugate. With a measurement of over 7.5 cm. a relative indication only exists. Many cases in this large group will escape a section if put to the test of labor. Often a cephalo-pelvic disproportion that exists previous to labor disappears as labor goes on. The labor test is recommended only when the patient is under the direct supervision of the obstetrician preferably in a hospital, where surgical intervention can be substituted at short notice.

Pelvic obstruction which can not be relieved is also an absolute indication. Care must be exercised, however, to make sure that an existing tumor does actually so obstruct the outlet that normal delivery is impossible. The mere presence of the tumor is not in itself an indication.

Eclampsia is only occasionally an indication for section. In the majority of cases manual dilatat on and rupture of the membranes followed by forceps or version will be the better method of treatment.

In placenta previa Boyd states that if the child is viable, the previa complete or partial, the cervix rigid or the fetus transverse, Cæsarean section is indicated. However he also states that in the last fifteen years he has seen but two cases in which these conditions were fulfilled.

No question in obstetrics deserves more weighty consideration on the part of the operator than the proper selection of cases for this operation. Boyd feels certain that at present many needless Cæsarean sections are being done.

G. R. II.

TUBERCULIN THERAPY

Werdler, Walter B.: The Present Status of Tuberculin Therapy in Ocular Tuberculosis. Ophthalmology, January, 1916, Vol. XII, p. 331.

The author after a thorough exposition of the use of Tuberculin as a therapeutic agency and its many failures comes to the conclusion that with a preparation of a standardized strength it undoubtedly has its place in therapeutics. Referring to the discussion as to whether or not phlyctenular conjunctivitis is tuberculous, he says:

"To argue that because the tubercle bacilli has never been isolated in a phlyctenule is sufficient to refute the tubercular theory that any of the cases of phlyctenular ophthalmia are due to tuberculosis, I think, is inconsistent reasoning. The same investigators will diagnose cervical adenitis as tubercular without the presence of tubercle bacilli. I think that a great many cases of cervical adenitis that get well by local and general medication are not due to direct presence of the tubercle bacilli, in the glands, but are due to a general tubercular toxemia, the result of some inherited or acquired strain of tuberculosis.

"I do not believe that phlyctenular ophthalmia is due to tuberculosis in every instance, but I do know that a very high percentage of these cases will show a positive von Pirquet and a general reaction to tuberculin. Furthermore, many of these children show enlarged glands, joint affections, and we often get a family history of tuberculosis.

"The phlyctenular lesions of the eye, I believe, are a local manifestation not due to direct action of a tubercle bacilli, but due to the action of a tubercle toxin or end toxin. It is not always possible to demonstrate the tubercle bacilli in some of the chronic ocular tubercular diseases with pulmonary lesions demonstrable. (Verhoeff's Case, A. M. A. Journal, July 4, 1914, Vol. LXIII.)

"The treatment of forty cases of phlyctenular with tuberculin by Davis and Vaughn show a very much larger and quicker percentage of cures than by the old methods therefore employed. Tivnen reports a series of 50 cases with 64 per cent of cures and 24 per cent improved, and Herrenschard reports a series of 103 cases with 101 cures, the two failures were in cases where there was great involvement and

they all responded well to the treatment. However, I do think that recovery is hastened by an early removal of the glands. In the first two years of this work with tuberculins in phlyctenular ophthalmia, no local or general treatment was given and no attention was paid to the diet or hygiene.

"We are now convinced of the excellent results obtained with tuberculin and believe that the local and general treatment is useful, and that the diet should also be attended to."

Then with reference to the deeper lying inflammation he adds:

"Keratitis, Superficial and Deep.-The greatest number of cases that we have treated with tuberculin have been affections of the cornea. These have been mostly superficial keratitis affecting the epithelial layer and Bowman's membrane and rarely or never causing ulceration. Several cases have been true interstitial keratitis, and in one there was a large sloughing ulcer involving the middle third of the cornea. I have seen, during these observations, several cases of episcleritis and scleritis in which I was able to secure a positive von Pirquet and a general reaction to tuberculin. Torek claims that from 90 to 95 per cent of all cases of epi and deep scleritis are due to tuberculosis, but I think that this is too high. We all see at our clinics many causes of keratitis in children which always requires a very long treatment with atropine, diet and tonics, and which always show a tendency to recurrence. A great many of this type of cases were cured by the "old form" of treatment, but there are a number, however, that I believe would be greatly benefited by the tuberculin injections, and I would especially direct your attention to them.

"Again in those cases where there is a direct history of tuberculosis in the family; where there is a history of recurrent eye trouble, and in those pale, pasty colored, overfat children whom we have always recognized as not good, healthy, vigorous

children, it is in this group I also feel that tuberculin therapy is absolutely indicated and of great lasting good in raising and maintaining the opsonic index and establishing immunity.

"In spite of a long treatment of tuberculin in some of these cases, we have seen recurrences of the ocular inflammation. When they are again given tuberculin injections, it is only a matter of three or four injections and then active reactions immediately follow the tuberculin ocularly, locally and generally."

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

RADIUM BROMIDE (W. L. Cummings Chemical Company).—It complies with the standards of N. N. R., and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

RADIUM CARBONATE (W. I., Cummings Chemical Company).—It complies with the standards of N. N. R., and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

RADIUM CHLORIDE (W. L. Cummings Chemical Company).—It complies with the standards of N. N. R., and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

RADIUM SULPHATE (W. L. Cummings Chemical Company).—It complies with the standards of N. N. R., and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Borcherdt's Dri-Malt Soup Extract.

—A powder obtained by adding potassium carbonate 1.1 gm. to each 100 gm. of Borcherdt's Malt Extract and evaporating. Borcherdt Malt Extract Co., Chicago.

Publisher's Notes

A WIDELY USEFUL SOAP.

Germicidal Soap, P. D. & Co. (formula of Dr. Charles T. McClintock), has been called "the soap of a hundred uses." The designation is not inapt. An exceptionally good cleansing agent, this soap is a powerful disinfectant and antiseptic as well. It is a useful lubricant. It is an efficient deodorant. The surgeon, the gynecologist, the obstetrician, the dermatologist, the general practitioner—all have use for the soap.

Germicidal Soap, P. D. & Co., combines the powerful antiseptic mercuric iodide with a soap made from pure vegetable oils. A solution of it containing 1:5000 parts of mercuric iodide destroys pus organisms in less than five minutes.

The soap is neutral, hence not irritating to the skin. It produces a thick lather, which may be allowed to remain on the operating-site for four or five minutes to insure thorough disinfection; on the scalp to rid it of dandruff; on the face in the treatment of acne. Many minor ailments, to which ordinarily little attention is paid, but which nevertheless are annoying to patients, are advantageously treated with this soap. For example, excessive perspiration and excoriation of the skin about the genitalia, the toes, the soles of the feet, are readily controlled by the application of Germicidal Soap lather or solution. Pediculus capitis aut pubis is readily disposed of by the same means. Abscesses, furuncles, various skin diseases of an infectious nature, are amenable to the application of the soap. An efficient vaginal douche may be prepared by dissolving a piece of Germicidal Soap about an inch square and half an inch thick in hot

water. A similar solution may be confidently used to cleanse the hands and instruments in surgical and obstetric operations. The wet soap is an admirable lubricant for specula, sounds, catheters, etc.

The product is supplied in two strengths: Germicidal Soap, 2 per cent (containing two per cent of mercuric iodide), in large cakes; Germicidal Soap, Mild, 1 per cent (containing one per cent of mercuric iodide), in large cakes and small cakes, the latter in boxes of five. Every well-stocked pharmacy carries Germicidal Soap, P. D. & Co.

One swallow doesn't make a summer: and one test doesn't constitute a guarantee of satisfaction. There are always a number of aspects to every article of utility, and although it may measure splendidly up to one of these aspects, if it fails in all the rest it can not be said to be a very efficient article. "Best by every test" is the measure of efficiency. That is the measure by which Calumet Baking Powder excels. Chemically, physically, physiologically, and domestically, it fulfills all the demands of modern science and art. It is chemically correct, physically pure, physiologically wholesome, and domestically efficient and dependable. If you can think of any other quality that ought to characterize a first class baking powder, no doubt the manufacturers will see to that, too. Personally, we can't. It looks to us as if a baking powder that can make good on those four claims is about as nearly perfect as a baking powder can be. However, you know the old proverb—"the proof of the pudding is in the eating of it." Calumet will stand that test, too.

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ORIGINAL ARTICLES

THE MEDICAL PROFESSION AND HEALTH CONSERVATION.*

R. H. McGinnis, M. D., Jacksonville, Fla.

It is with pleasure I take this opportunity to express my appreciation of the honor you conferred on me by electing me your President at the annual meeting last year. It is indeed a great honor to be President of this association, and in attempting to convey to you my gratitude, mere words are inadequate. For my failures in the discharge of the duties of the office, I crave your forgiveness.

The Journal of the Florida Medical Association.

The association, I am satisfied, made progress the past year; did not accomplish all desired, but advanced. The Journal of the association, now two years old, has added interest to organized medicine in the State. Its pages are clean and wholesome. It offers to every member a medium of publication of any article of merit. It compares favorably with the other State journals of equal membership. It provides for reprints of any scientific paper contributed to its columns, at reasonable rates. Its exchanges are valuable and demand some action of the association as to their proper disposal and care. There has been, however, a lack of whole-hearted cooperation and support from the members. The editor and collaborators perform a voluntary and arduous service and are entitled to encouragement.

Medical Legislation.

Through medical legislation, the profession cherishes the hope of eventually having

*President's address delivered before the fortythird annual meeting of the Florida Medical Association, held at Arcadia May 10-12, 1916. enacted into law measures conducive to the protection of the public and the conservation of health. This is a prodigious undertaking and has met with unmerited reversals. It is our duty to "hew to the line" and teach mankind the fundamental principles on which our science is based. The profession must steer clear of the Scylla of medical inefficiency and the Charybdis of so-called drugless therapeusis. Cults and isms of healing have never stopped the progress of scientific medicine. But for ignorance, internal and external to the profession, better medical laws would long ago have been enacted.

Medical Examining Boards.

The present Board of Medical Examiners of this State for the regular school are making for more efficiency; considering the schools of graduation and the qualifications of the graduates; endeavoring to eliminate the incompetent and undesirable; elevating the standards of medical licensure and, by difficult effort, trying to conserve the public welfare. This board needs the support and encouragement of every member of the association. It is possibly lacking in many particulars. This it realizes and is trying to rectify. Its efforts will be greatly facilitated by the federation of State boards and the formation of a national or federal board with State rights venerated.

Medical Colleges.

The medical colleges of the nation, realizing their inefficiency as teaching institutions, have in the past few years reduced their number by merger and amalgamation 33½ per cent. They are providing wholetime and well-paid teachers and instructors for the student; raising the standards of matriculation and graduation, and are requiring more and better practical work of

the student. This argues for the graduate a better qualified practitioner; a doctor equipped with the knowledge of diseased conditions, with the ability to apply therapeutic measures with better success. Not only will the graduate be qualified to treat the sick intelligently, but also to instruct the public the value of wholesome living, sanitation and hygiene. Prevention of disease is the aim of the medical profession, and no body of scientific workers has accomplished as much along this line. This idea and its practice followed to its logical conclusion would seem to be the funeral obsequies of the medical profession, but not so — if the profession ceases to be one of medical application, it will become one of health conservation. Moreover, the public require a lot of instruction.

Patent Medicines and the Medical Quack.

The medical profession condemns patent medicine and the medical quack because of their false claims and inferences, and has received meager support from the public. The people of Florida spent last year \$750,000 for patent medicines, which are worthless and sometimes dangerous to the user. If such a sum were directed in proper channels and utilized scientifically each year for the prevention and eradication of hookworm disease, pellagra, typhoid and malaria fevers, the State would be free from these maladies in five years.

The Public Press.

The profession has succeeded in eliciting the interest and influence of some of the leading publications of this country in health conservation, and such publications are to be commended. Continued effort is necessary, however. Not until commercialism is eliminated from the press—lay, and sad to relate, sometimes the medical — will the public be free from the octopus of the advertising fakir and the patent medicine fraud.

The Medical Profession.

Much as has medical science done and is doing for health conservation, through its various avenues of instruction of the public. continued and strenuous effort is demanded. The public is rather slow to understand the necessary individual requirements that are conducive to good health. While a large portion of the misunderstanding is due to ignorance, there is also a large proportion due to indifference, carelessness and neglect. If this latter portion could be convinced and it acted upon its conviction, a great instructive force would be propagated that the resistance of ignorance could not prevail against. The human being is so constituted that he will take chances, especially with his health. He will speculate with it to a greater extent than with financial interests. He makes his body an exchange into which he puts various and sundry ventures, without proper consideration, trusting the body to produce a dividend on the investment. The body, constructed for emergencies, will respond for a time, but sooner or later its reserve is expended and collapse ensues. The damage is done, rejuvenation impossible and repair questionable. The measure of success in this propaganda of health conservation depends on the activities of the profession. The trend of the profession, at present, presages the ultimate eradication from its own ranks the incompetent and unqualified, and when the public support the profession's initiative, an era of health conservation will have advanced a long way. Education is the hope of success.

THE PHYSICIAN AS AN AID TO INDUSTRIAL PROGRESS.*

E. W. WARREN, M. D., Palatka, Fla.

Industrial progress is dependent primarily on health. No industrial enterprise attains its maximum success unless it makes reasonable provision for the health of its employees. Neither employer or employee is capable of his fullest activity when suffering from

^{*}Oration delivered before the forty-third annual meeting of the Florida Medical Association, held at Arcadia May 10-12, 1916.

physical discomfort or is under the dread of disease. To do his best he must be a contented individual. He must not only be protected from disease and injury but his family must have every assurance that contagion and infection will be kept as far from them as possible. When the employee is assured that injuries received in performance of duty are to be properly cared for he will the more cheerfully put forth his best His position at present demands more. He must know that every possible precaution is being taken to see that the hygienic and sanitary conditions surrounding his living quarters are the best and the health of his family provided for. Certain industrial enterprises at the present time are initiated by preliminary health surveys, the establishment of sanitary regulations and the removal or correction of unhealthful conditions before it is thought wise to begin operations.

The gradual but increasing recognition of these facts have developed a new line of activity for the physician—that of taking care of the public health, or the health of the public. It is a broader field than that of treating the sick individual. It is an effort to keep individuals well en masse. Good health is more and more becoming recognized as a business asset. This is a newly recognized fact in the development of industrial enterprise. Employers of large numbers of human machines are realizing the surprising fact that as a cold business proposition it pays, not in sentiment but in dollars, to take good care of their em-Business men are learning that well fed, well clothed, contented men and women, working in well-ventilated, welllighted quarters on schedules arranged in accordance with modern knowledge of physiology actually turn out more and better work, than underfed, underpaid, discontented help working under uncomfortable, unsanitary conditions. Therefore, large corporations are spending money more liberally,

establishing sanitary lunch counters, safety devices, ventilating apparatus, etc. asked why they are doing all this, they reply that it is not charity but common sense. A well man is worth more than a sick one. A happy, contented woman will turn out more work than the unhappy or sickly one. The conservation of the health of employees will be a fundamental principle of good business in the future. Men think as they are trained to think. Therefore, an educational campaign should precede hygienic changes in working conditions. Let us as physicians make it our business to make more clear the cost of the human mechanism, the care of the human machine in all its parts and the extravagance of human waste.

Transportation companies, including railway and steamship companies, owe a debt to humanity that is manifold in its ramifications. First, to its employees, (a) to those injured in the performance of their duty; (b) to the employee while on duty to protect him from contagious and infectious and other bodily ailments as far as possible. Second, to their patrons, (a) to guard them against injury; (b) to protect them against communicable disease while being transported from place to place. Third, in not transporting persons or commodities from infected to uninfected territories. As evidence of their recognition of this debt, note their splendidly equipped, expensive surgical and sanitary departments, and note also their ready compliance with severe quarantine regulations in times of epidemics. A number of large corporations have carried this idea into unusual detail by establishing periodic physical examination of employee and family, making a complete chart of each individual for permanent record, noting weaknesses, etc., and offering proper treatment when indicated.

Probably the greatest achievement of modern medical men and out of which has developed their greatest good was the discovery of the mosquito's role in the conveyance of yellow fever and malaria. In all history there has been no greater hindrance to the industrial progress of tropical countries than these two diseases—malaria and yellow fever. No great undertaking could be successfully carried out except at a cost of human life and suffering as render it deterrent in all but a few cases. It remained for the discoveries of medical men to render the tropics as healthful as any other portion of the world under proper environment.

Out of these two discoveries grew the possibilities of the Panama Canal, the greatest monument to sanitary science ever thought of. It is a matter of historical certainty that the French government failed to build the canal because of the high death rate among their employees. When the American government took hold of the proposition and a physician was ordered to make the territory habitable he was allowed all the time and funds necessary and in the face of the impatience of the entire nation to see the "dirt fly," he proceeded systematically and carefully on a well thought out plan of sanitation, and to the wonder and astonishment of the world he established a veritable health resort in the hitherto "death hole" of the American continent, with a morbidity and mortality rate so astonishingly low as to be almost unbelievable. The skill of the medical men gave to the world the possibility of the greatest engineering feat of which we have any knowledge. It gave to the western world its short cut for its shipping, thereby saving many thousands of miles to navigators together with their freedom from the dangers of the circumnavigation of South America. Ex-President Taft recognized and stated publicly that the successful outcome of the great undertaking was due primarily to the work of the army medical corps under Dr. Gorgas.

The Spanish-American war developed the greatest sanitarian of all history. The great work of Dr. Gorgas in eradicating yellow fever from the city of Havana set an example that municipalities may follow with advantage to themselves. Numerous North and South American cities have already availed themselves of the lesson. South American seaports that formerly were so infected with yellow fever that they only existed by force of circumstances, with a death rate that was staggering in dimensions, are now prosperous, healthy, growing cities. Profiting by that example when a few years later vellow fever secured an entrance into the cities of our gulf coast we were able for practically the first time in history to stamp it out before frost. later when bubonic plague invaded San Francisco it was eradicated after one of the most strenuous and far-reaching campaigns ever undertaken by our government. The nature of bubonic plague and its method of transmission is so insidious that nothing but the most diligent and painstaking work will accomplish its eradication.

No greater industrial or commercial calamity can happen to a community or municipality than to have yellow fever, bubonic plague or Asiatic cholera introduced into its population. It results in a paralysis of business, financial and commercial loss that affects every class of individuals. Factories shut down, transportation is reduced, laborers laid off from work, destitution and hunger become apparent and bread lines are established. Municipal growth stops, business houses begin to fail from loss of usual current of business and heavy expenses are incurred in financing quarantine regulations. Neighboring cities become suspicious, trade falls off, customers afraid to come and as a consequence trade shifts to other places. Protection against such misfortunes provided by quarantine regulations and sanitary systems worked out and administered by physicians. The average individual is not aware of the great amount of protection he constantly receives and he fails to give due recognition to the real source of such protection.

It is only within very recent years that

the rural population has begun to learn of the precautions which are absolutely necessary to prevent the spread of infectious disease. From the bedside of the patient typhoid fever is frequently spread individuals over a whole neighborhood many miles in extent. With our present knowledge of the modes of transmission of typhoid we are already able to circumscribe its ravages and taking into account the isolation of country people and their lack of intercommunication, we may confidently expect to almost eradicate typhoid. When the people are convinced that with the erection of sanitary closets, the building of barns a sufficient distance from residences, the proper placing of wells with reference to drainage, and constant periodical vaccination against it we may soon be able to gain the same control against rural typhoid fever that is now possible in cities. Not a case of typhoid fever occurs now either in city or country but the question arises at once, where did it come from? Let us have the water examined. Let us have the house screened. The neighbors who come to sit up with the sick are afraid to eat or drink on the premises. The doctor now advises the family to be vaccinated against typhoid. He also carefully advises and urges every sanitary precaution against its spread. It is hard to estimate the good to the community in following the one little point of advice in regard to anti-typhoid vaccination. Many years ago when a scourge of typhoid visited a small city in this vicinity untold suffering could have been prevented, many lives saved and much economic loss avoided.

The Hookworm Commission in Porto Rico estimated that at the time of the Spanish-American war 90 per cent of the 1,000,000 people were suffering from hookworm infection and that the infection was increasing. It was found that the average adult was able to accomplish only about 40 per cent of a normal day's labor. When we think of 900,000 people being able to perform less than a half a day's work per day

the result is appalling. The Hookworm Commission continued its work in Porto Rico until practically the entire population had been treated. In that case it is easily believable that the earning capacity of the population was doubled. The same is true only in a smaller way in our own Southern States. The hookworm infection was very much greater than was dreamed of by any but a few students of the situation. That condition is greatly changed today. Many thousands of our people are healthy, happy and prosperous who at one time bid fair to become public wards.

Infant mortality which has played so important a part in the population of the world is gradually giving ground and even now the tiny, helpless babe has almost as much chance and hope of life as its grown-up brother or sister. The movement to prevent infant mortality amounts to just this, to give to the baby its material birthright, namely: pure milk, pure air and a better educated and trained mother to care for it. The fundamental causes of infant mortality mainly are poverty, ignorance and neglect, with ignorance playing far the greater part. This greatly affects our population without any change in our birthrate. In 1866 the Metropolitan Board of Health was organized to supervise the health of the cities of New York and Brooklyn, the counties of Westchester, Oueens and Richmond and a part of the present county of Nassau. At that time the sanitary conditions in these cities were inconceivably bad. The death rate especially of babies was higher than any of the other large cities and apparently in-During the fifty years of its creasing. existence the death rate has been reduced almost 75 per cent. Sir Frederick Treves believes that the time will come when hospitals for infectious diseases will be empty and not needed. The fight will be made and the victory won by hygiene. The enemies are the microbe and ignorance, the weapons are education, the sanitary inspector and health regulations. The sensational

headline in the newspaper announcing the much dreaded yellow fever or bubonic plague, with its consequent business paralysis and economic loss, will be no more.

INDIGESTION.*

MARVIN H. SMITH, M. D., Jacksonville, Fla.

The word "indigestion" comes from the Latin "in," meaning "not" and "digerere," "to separate," thus meaning literally, "not to separate." As defined in the Standard Dictionary, it means, "difficulty in the alimentary canal in changing food into absorptive nutriment." "Dyspepia" is given as a synonym. Kerr has wittily said that "Dyspepia is the remorse of a guilty conscience."

It is an expression used by most persons to designate any slight or permanent derangement of the digestive system. It vaguely embraces water brash, heartburn, vertigo, flatulency and a vast multitude of other irritabilities arising from any portion of the digestive tract, or any gland pertaining thereto.

With the definitions given, we may, for the sake of having a working basis, make four classifications, viz., stomach and intestinal indigestion, according to its supposed location; acute and chronic, according to the length of time it has existed.

"Indigestion" is the most familiar term that the physician hears. It touches all ages and classes; it visits alike, the home of mediocrity and genius. The young mother uses it when referring to her baby's first experience with reversed peristalsis. The schoolboy who bolts his food at lunch and then rushes back to the playground, complains of it. The young woman who entertains her men friends, eats pickles, confections and nicknacks, has little relief from it. The busy housewife with her daily round of duties; the clerical man who sits

at his work; the banker who puzzles his brain about money, all suffer its unpleasant consequences. The doctor who has upon his soul the burden of many sick folk and does not take time to relax after meals is provoked by it. The public speaker and the soloist find it a nuisance. The aged who have lost their teeth and swallow their food unmasticated must endure its torment.

The druggist is constantly being called upon by individuals who have investigated their own cases; have made their own diagnoses and then ask his advice about treatment. He has upon his shelves from fifteen to thirty patent remedies, all of which are guaranteed to cure such maladies. He sells them freely though they are seldom if ever known to give more than temporary The individual having now grown gradually worse, consults his family physician whose interest is not always sufficiently aroused, and he too, I regret to say, in a half doubting manner often writes a prescription without that feeling of confidence which he should have, or without knowing whether to aim above or below the belthis results as to a cure being correspondingly uncertain.

Indigestion is a word so broad in its meaning and so loose in its application, but so general in its use that almost every layman, both young and old, employs it with remarkable precision (?) and emphasis to denominate from sixty to seventy per cent of his bodily ailments. Indeed it is the characteristic disease of our time, and is a symptom-complex from which few men or women over thirty have not suffered.

It has been known to completely change the disposition of individuals. Sidney Smith once said, "Old friendships are destroyed by toasted cheese and salted meat has led to suicide." Kingsley gave us this maxim, "Banish dyspepsia and spirituous liquors from society, and you have no crime, or, at least, so little that you would not consider it worth mentioning."

^{*}Read before the forty-second annual meeting of the Florida Medical Association held at De-Land, May 12-14, 1915.

It has been known to destroy domestic happiness, and has modified the destiny of nations. It is said of Louis XIV, who

suffered from a fistula and indigestion, that his reign was divided into two parts, that before and that after the fistula.

				LE I		
W. C.	Age 40	Sex M.	"Indigestion," pain in epig. 3 hours. P. C. eructation, c'ust'p'n, pyrosis more or less constantly.	Onset Gradual.	Stomach Findings 3 oz. expressed. T. A. 200°. F. A. 130°. C. A. 80°. Pep. and Ren.	Diagnosis Hyperchlorhydria.
G. P.	26	М.	Sudden severe abdominal pain, "acute indigestion."	Acute.	No analysis made.	Perforating duodenal ulcer.
M. L.	38	F.	"Indigestion," totalloss of energy, heaviness in stomach (Epsom salts daily for 2 years).	Gradual.	4 oz. expressed. T. A. 0°. F. A. 0°. C. A. 0°. L. A. 0°. Pep. and Ren.,none Mucus present.	Atrophic gastritis.
H. G.	37	М.	"Indigestion," fullness in stomach, anorexia, constipa- tion, pain between shoulders.	Gradual.	1 oz. expressed. T. A. 2°. F. A. 1°. C. A. 0°. L. A. 0°. Blood. Pep. and Ren. deficient.	Cancer of pylorous; congenital stric- ture of sphincter ani muscles.
G. I.	42	M.	"Indigestion," pyrosis, sour eructation, constipation, pylorospasm.	Gradual.	2 oz. expressed. F. A. 92°. T. A. 116°. C. A. 30°. Pep. and Ren.	Pyloric ulcer, trau- matic stricture of sphincter ani.
К. Н.	25	F.	"Indigestion," substernal pain, epig. distress, dyspnæa, constipation.	Gradual.		Mucus gastritis, gastroptosis.
N. L.	38	F.	"Indigestion," flatulency, gastralgia, anorexia, nervousness, (carb. mag. daily 2 years, 10 b. m. daily for 2 years).	Gradual.	2 oz. expressed. T. A. 16°. F. A. 10°. L. A. 0°. Pep. and Ren. deficient.	Entero-colitis, mucus gastritis.
N. W.	28	F.	"Indigestion," vomiting P. C. pyrosis, epig. soreness, low grade temp. Dullness in right L. apex.	Gradual.	3 oz. expressed. T. A. 28°. F. A. 18°. L. A. 0°. Pep. and Ren.	Gastric ulcer, Pulmonary TB. of R. lung (incipient).
A. P.	28	М.	"Indigestion," acute pain when food is swallowed, epig. tenderness and soreness, epig. fullness, constipation (occult blood).	Gradual.	T. A. 74°. F. A. 56°. T. A. 20°. L. A. 0°. Pep. and Ren. present.	Ulcer in cardiac opening of stomach.
L. R.	22	F.	"Indigestion," pain in epig. P. C. (30 m.), constipation, eructation, headaches, pressure over appendix gives epig. pain.	Gradual.	Blood present. 4 oz. expressed. T. A. 34°. F. A. 22°. C. A. 2°. L. A. 0°. Pep. and Ren. present.	Chronic appendicitis.

Indigestion to the lavman, and to many physicians, rarely suggests a grave condition, or one that could have a serious termination; however, it is a term misleading and deceptive in the extreme. In my judgment, it is the most elastic and as generally applied, the most meaningless term in medical lore. Its causes are innumerable, and it actually covers as many distinct clinical entities. It embraces physical states, which like a thief in the night, may come on so insidiously that it is impossible to tell just when the first symptom appeared. Many of these cases change from a functional to an organic disease, gradually advancing to chronicity and incurability. It also includes those ushered in with great suddenness accompanied by excruciating pain, followed by shock and occasionally by death.

I think of no other word whose sound carries with it such insignificance and vet whose true meaning may prove of such farreaching and disastrous influence. This observation leads me to believe that every single case of so-called indigestion is entitled to the most painstaking investigation, careful diagnosis and well-directed treatment. When the individual first complains of indigestion, we may be reasonably sure that we are dealing with an irritability which has existed for some little time, and is already fairly well established, since the nerve terminals of the digestive mucosa become more or less tolerant to irritation and do not report the damage promptly, e. g., we know that when we first begin to eat highly peppered food it produces considerable burning in the mouth and upper œsophagus with more or less stomach distress, but soon the stomach ceases to offer its protest and submits, for a season, to the insult until its structures have become injured. Many other illustrations could be cited.

We cannot be too particular in locating the cause of indigestion and determining as accurately as possible the exact nature of the trouble. Many patients and a few skilful physicians have been deceived on these points. The difficulty may be a reflex, arising from pregnancy, syphilis, tuberculosis, appendicitis or numerous other sources; perhaps there is only a neurotic state present or there may be dangerous pathology lurking in the œsophagus, stomach, bowel, pancreas, liver or colon; adhesions, atony, intestinal stasis or a vast multitude of other abnormalities may exist; they may be simple or they may be grave.

The case records in Table I illustrate more fully the meaning of these remarks, show the unreliability and uncertainty of this term as generally applied and emphasize the great importance of a most thorough investigation on all so-called indigestion.

CREEPING ERUPTION.*

G. H. Edwards, M. D., Orlando, Fla.

In this paper I will not burden you with the history of creeping eruption nor go into detail over its histology or pathology. If you will turn to the files of the J. A. M. A., January 15, 1916, you will find an excellent paper giving all that is known along those lines. I will simply state that the disease was first reported in 1847 by Robert Lee. It is said to be extremely rare. Russians have reported the majority of the cases, making it appear to be more prevalent in Russia than elsewhere.

I wish to call attention to its frequency in central Florida. Now either the disease is not as rare as supposed and we are careless in our diagnosis, calling it ground itch or dhobe itch, and do not rush into print with our findings, or else Orlando and vicinity is the one unfortunate spot in Florida as regards the prevalence of this affliction. I wish to report thirteen cases, ten in my own practice and three which I saw in my

^{*}Read before the forty-third annual meeting of the Florida Medical Association, held at Arcadia May 10-12, 1916.

partner's in the year 1915. In addition to these both Drs. McEwan and Beardall had a number of other cases which I did not see.

Creeping eruption is a skin lesion presumably due to the larva of a member of the fly family, either the bot or gad. The larva is of microscopic size. It effects entrance into the skin presumably through an abrasion as shown in one of my cases, or through the skin when softened or macerated by perspiration or water as shown in four of my cases. The parasite burrows between the horny and deeper layers of the skin producing a slight elevation, very irregular in its course, often making a loop. It presents the same picture as that of a mole track in a closely cropped lawn. The elevation at first is slightly reddened and a little serum will exude if scratched. In a few days it fades and turns brownish or more often becomes pusy and crusted following scratching. has been said that this parasite can be seen as a fine black or dark spot a short distance in front of the burrow if firm pressure is made over the area with a glass slide. have several times thought I saw this little spot by the aid of a reading glass, but have never been able to transfer it to a slide despite very careful scraping and expression of serum and blood from the region of the dark spot.

In all my cases attention has been drawn to the condition by the intolerable itching. The itching seems to denote an excursion on the part of the parasite, for always thereafter the mole-like track has extended. Several days may elapse before the itching is again severe, during which interval the lines fail to extend.

I have seen the lesion located upon every part of the body, except the head. The lesions in my cases are distributed as follows:

Feet and legs, six.

Sole of feet, two, each having a single

Arms, legs, chest, back and belly, two.

Knee, one.

Buttocks and thighs, one.

Hand and wrist, one.

The occupation of the individuals:

Retired turpentine operator, one. (Horse fancier.)

Stonemason, one.

Schoolboys, four.

Carpenter, one.

Cook, one.

Trained nurse, one.

Laborers, two.

Baby, one.

Housewife, one.

There seems to be some difference of opinion as to the period of incubation. I wish to call attention to the extremely short period between invasion and the appearance of symptoms. In several of my cases I can tell you almost to the hour when inoculation occurred and when the first symptom, that is itching, was observed.

Case 1.-Mrs. E. Housewife:

In the afternoon of our October deluge in 1915, in the absence of her hired man, she spent some time in a flooded barn yard, rescuing a new born calf. Her feet became saturated and without changing she harnessed and drove several miles to get help. Four hours later an intolerable itching began in her feet, around the great and little toes. The next morning she had typical ground mole-like lines on both feet. Her hired man also developed the same condition, this being the only case I have seen on a colored person.

Case 2.-D. W. Schoolboy:

Fell off his bicycle upon the brick pavement at four p. m., abrading both knees. At bedtime, that is four hours later, was conscious of a burning and smarting of the knees. This continued steadily for two days when he was brought to the doctor. At that time typical mole-like ridges two to four inches long radiated from the abraded areas over both patellas.

Case 3.—Female baby. Fourteen months old:

In Florida for three days, spent a short

time early one morning crawling and sitting in wet Bermuda grass and sand in the back yard near the stable. That afternoon child was restless, fretful, slept little during the night. When I saw the child twenty-four hours after its play there were eight to ten mole-like ridges one-half to three inches long over the buttocks. Twenty-four hours later these had extended from one to three inches, going down the thigh, up the back, to the margin of the anus and one bold rascal had invaded the vaginal mucous membrane. The child was in convulsions.

Case 4.—Mr. A. Stonemason:

After working in the hot sun all the morning, perspiring freely, he crawled under his car which was standing under an oak tree where horses had been hitched, and there worked most of his noon hour. About four p. m. his back began to burn and itch. Soon he was itching from neck to shoe tops. Eighteen hours later when he presented himself in the office he was literally covered with mole-like tracks one-half to two inches long.

Now all four of these cases were exposed to inoculation in the presence of horse manure, which would bear out Samson's theory that the active agent is the larva of the Gastrophilus Hemorrhoidalis or botfly. You will also note that all four cases began to have symptoms of the condition, that is itching, from three or four hours after exposure.

My treatment is very simple; a bistuory or scalpel scratch is made deep enough to draw a little serum and blood over the last one-fourth inch of, and for an equal distance in advance of the track. Just beyond the end of the track I make a crucial incision or scarify, and then I cauterize the incisions with carbolic acid, iodine or a silver nitrate stick. I prefer the former. To make a cure doubly sure I often apply an ointment containing 10 per cent sulphur and 20 per cent salycilic acid, and always use it when the treatment by incision and caustic is refused, as it is quite often.

TREATMENT OF MALARIAL HEMOGLOBINURIA.*

K. Cross, M. D., Crystal River, Fla.

In all the literature on malaria, there can be found but very little on Malarial Hemoglobinuria and it is only those physicians who have lived in sections where it is prevalent, that have the opportunity to study and treat it successfully. Under different names (black water fever, hemorrhagic fever, yellow chills, etc.) it is known from Texas to North Carolina in the States bordering the coast. In sections where it is prevalent it is known and dreaded by physician and laity. It is most often seen in those suffering from chronic malaria, untreated or improperly treated malaria or where the patient has tried self-medication with some of the widely advertised chill tonics. The on-set of hemoglobinuria during an attack of malaria is pathognomonic and treatment should be begun early; a delay of a few hours may mean that all treatment, however good, will be unavailing.

In all of these cases, there is more or less nephritis present and our treatment is in part that of nephritis. We should seek for elimination by the skin and bowels and for rest to the kidneys. Treatment should be begun by giving twenty to thirty grains of calonnel every two hours until from sixty to one hundred twenty grains have been given. Pilocarpine muriate one-eighth to one-fourth of a grain doses given hypodermically every four hours as long as the hemoglobinuria persists. The marked nervousness and restlessness is best controlled by twenty to thirty grain doses of sodium bromide every three to four hours.

Morphine should not be used, for it inhibits the eliminative process which is so essential.

Quinine has no place in the treatment of malarial hemoglobinuria, its hemolytic ac-

^{*}Read before the forty-third annual meeting of the Florida Medical Association, held at Arcadia May 10-12, 1916.

tion in these cases is well known, it increases the hemoglobinuria and in my experience it has proven fatal in every case where it has been given.

Alcohol in any form is also absolutely contra-indicated both during the attack and for several weeks following. Its action in these cases resembles some powerful poison, causing first a violent delirium, then later coma; death following in about twelve hours after taking it. Stimulation is nearly always needed and in the beginning of treatment one-third-grain doses of pulverized extract digitalis should be given every six hours and continued all through the attack. If, at any time, immediate stimulation is necessary, nitroglycerine, strychnine and digitalin should be given hypodermically. This is of especial value during the first twenty-four hours of the attack or until the physiological effect of the pulverized extract digitalis is evident.

After the cessation of the hemoglobinuria a suppression of urine may occur and should this condition ensue, it is of grave prognostic significance and no diuretics should be given except some of the alkaline mineral waters and they should be used freely.

Pilocarpine, hot packs and purgation should be resorted to and the condition treated as an ordinary nephritis.

The after-treatment of these cases is tonics, rest and removal to a non-malarial climate if possible, for subsequent attacks are prone to occur in those who have once had it.

PROPAGANDA FOR REFORM.

Diarsenol.—Dr. E. H. Martin, Hot Springs, Ark., reports that, after giving several hundred doses of Diarsenol without any bad effects whatever, he had two cases in which nausea, vomiting and symptoms of apparent collapse occurred such as have been previously reported by another writer. He found on investigation that the specimens which in his hands gave untoward results as well as those previously reported on and two further accidents were all due to a

product bearing the same lot number. (Jour. A. M. A., April 8, 1916, p. 1155.)

PRESCRIBING OF NARCOTICS.—The Harrison Antinarcotic law exempts from its operations ready-made mixtures containing specified small quantities of narcotics, but requires physicians' prescriptions containing small amounts of narcotics to be registered. The law should be made consistent by requiring the registration of all prescriptions containing narcotics in any amount. The inconsistency in the law should be removed by prohibiting absolutely the sale, except on a physician's prescription, of preparations containing narcotics in any proportion. The continued uses of small doses of a narcotic drug is just as capable of establishing the habit as is the use of larger doses. (Jour. A.M.A., April 8,1916, p. 1156.)

A Much-Needed Pharmacologic In-VESTIGATION.—J. D. Pilcher, University of Nebraska College of Medicine, has investigated the action on the uterus of the guinea pig of a number of drugs which are widely used as ingredients of proprietary "female remedies," and which so far have been little, or not at all, studied. Blue cohosh (Caulophyllum thalictroides) showed a variable tonic effect. Pulsatilla (Anemone pulsatilla or Pulsatilla pratensis), unicorn root (Aletris farinosa), figwort (Scrophularia marylandica), valerian (Valeriana officinalis) and skullcap (Scutellaria lateriflora) were more or less depressant. The following drugs gave negative results: Cramp bark (Viburnum opulus), black haw (Viburnum prunifolium), swamp maple (Acer spicatum), false unicorn (Chamælirium luteum or Helonias dioica), liferoot (Senecio aureus), wild yam (Dioscorea villosa), motherwort (Leonurus cardiaca), passion flower (Passiflora incarnata) and squaw vine (Mitchella repens). It is to be hoped that Pilcher's work will permit the formation of an opinion as to the therapeutic value of those drugs in which some degree of activity has been found. (Jour. A. M. A., April 15, 1916, p. 1205.)

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ORGANIZED MEDICINE.

It is a matter for congratulation for all members of the medical profession that organized medicine has its forces lined up in better array at the present time than at any period in the history of the profession. The movement is general all through the country, and young men entering the profession are rapidly learning that it is to their own interests to identify themselves with their local county and state organizations. This is the only portal of entry to fellowship in the American Medical Association, and not only our professional associates, but the laiety from whom we derive our living are quite commonly inquiring into the status of a physician they auticipate employing, by ascertaining his local and national organization affiliations and activities therein.

It is pleasing to note that the Florida Medical Association is keeping up with the procession, having increased its membership thirty-five per cent in the past two years.

The recent annual meeting of the Association at Arcadia was well worth attending, the fact being generally commented on that the scientific program was the best that has ever been given. A full and free discussion was entered into on the many interesting papers prepared, and we do not believe a single man attended the meeting without acquiring advantage to himself.

In the past it has been held that climatic conditions in the South are not conducive to mental activity, but while it is not the purpose at this time to review the accomplishments of the medical profession of the South, it is a fact no one can conscientiously controvert that the Southern medical man has fully contributed his share toward the advancement of medical science.

Our next meeting will be held at Florida's famous seaside resort, Atlantic Beach. It is the earnest desire of the officers of the Association that this, the forty-fourth annual meeting, will prove to be the largest and most successful gathering in our history.

THE JOURNAL OF THE FLORIDA MEDICAL

Association is now two years old and may be considered firmly established as the official organ of the association. This, the Index Number, develops many interesting facts concerning the progress of the publication. The number of original articles and of contributing authors shows a decided increase over last year. A department specially devoted to a discussion of the cancer situation has been created. In the list of collaborators we find, in addition to the branches covered last year, the names of gentlemen who cover the subjects of opthalmology, otology, rhinology, laryngology, and of ræntgenology. To the members of the Association and to the readers of THE JOURNAL our message in this the closing number of our second volume is, If you wish the organization and its publication to continue to prosper, do your share in contributing support, only remembering that in giving it you are not giving something away, but simply advancing your own interests.

VACCINE TREATMENT.

"Looking backward over the development of active immunization by vaccines during the last fifteen years, we appear to be at the termination of one epoch in the therapeutics of infectious disease. In this issue, Hektoen traces the stages by which vaccines which were first employed with attempted scientific control have come into indiscriminate and unrestrained use, with no guide beyond the statements which commercial vaccine makers are pleased to furnish with their wares. Already most physicians are realizing that the many claims made for vaccines are not borne out by facts, and that judging from practical results there is something fundamentally wrong with the method as at present so widely practiced. As clearly shown by Hektoen (Jour. A. M. A., May 20, 1916), 'the simple fact is that we have no reliable evidence to show that vaccines, as used commonly, have the uniformly prompt and specific curative effects proclaimed by optimistic enthusiasts and especially by certain vaccine makers, who manifestly have not been safe guides to the principles of successful and rational therapeutics.'

"But out of this wild period from which we are emerging there have come certain benefits which promise to be more or less permanent. The study of prophylactic immunization against typhoid and other similar diseases has been fostered, and the time of attainment of its present efficacy perhaps hastened; the effects of active immunization in accelerating the development of immunity and recovery in certain chronic localized infections of our etiology have been studied; the search for sources of infection from which autogenous vaccines could be obtained has led to a more careful examination of patients, who have thus been indirectly benefited by having the source of their troubles discovered and removed.

"It has been difficult for most physicians to distinguish between the relatively limited field of prophylactic immunization in which scientifically controlled experiments and carefully observed and analyzed results have confirmed the claims of the method, and the other field of the use of vaccines in which mixtures of bacteria and their products have been indiscriminately introduced into patients suffering from all manner of disease, infectious and noninfectious, acute and chronic, without study of the patient, or knowledge of the etiology or pathology of the disease. But the latter use of vaccines can not be condemned merely on the ground of its empiricism. As Theobald Smith has said. We can not do without empiricism wholly. We owe valuable suggestions and discoveries to it. These are like clearings in the forest unconnected with other clearings, but destined to become the nucleus of a healthy scientific growth.' When, however, it becomes evident that empiricism has run riot, that it has wholly divorced itself from scientific control, and when, in addition, its results, impartially reviewed, are shown to be unbeneficial, we must conclude that such a clearing has been badly located, and that it never can occupy a worthy place on the highway of scientific medical progress.

"In regard to the more recently developed methods of intravenous therapy in typhoid fever, Hektoen points out that certain new concepts and theories are introduced which need diligent study and correlation before their application to the problem can be settled. Here again we find ourselves in another pioneer clearing in an unexplored forest. Only the future can determine whether this clearing is to become a useful station, or whether after a brief existence as a point of interest it will prove to be far removed from the thoroughfare of legitimate travel. Certainly the development here should proceed cautiously.

"Already a similar procedure has been introduced for the intravenous treatment of other subacute and chronic infectious diseases, such as arthritis, and some observers have asserted that the amelioration of the symptoms in the joints following

the treatment is sufficient to establish it as a worthy routine treatment. The fact that in the subjects of arthritis and even in normal persons the intravenous injection of bacterial or other protein is followed by a rather characteristic sequence of phenomena of fever, chill and leukocytosis by no means stamps the method as a justifiable type of empiricism. Indeed, other observers have noted that patients so treated relapse, and that the number of those who do not relapse is apparently no greater than the number of untreated patients who recover spontaneously. Such treatment, ineffective in itself, actually hinders recovery by distracting attention from the search and removal of the cause of the arthritis.

"The fact that much time and effort of the past ten years appear now to have been wasted, so far as positive results go," says The Journal of the American Medical Association, "should make us doubly cautious in accepting a new and somewhat similar procedure until opportunity has been afforded for its verification under conditions favorable for scientific control."

Cancer Department

"In the early treatment of cancer lies the hope of cure."

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

To launch and guide to a successful conclusion an annihilating attack upon any potent enemy which is threatening man's physical, moral, mental or religious existence, necessitates a sound understanding of that enemy's life history, its haunts, habits, methods of propagation, associates, methods of waging war, and its most vulnerable points of attack. Upon the accuracy and availability of our information concerning these attributes of cancer will depend, in large measure, our ability to eradicate the menace to adult humanity.

With a keen realization of this necessity; with unassailable qualifications as a statistician, and with an unquenchable thirst for the whole truth of the cancer situation, Mr.

Frederick L. Hoffman, statistician of the Prudential Insurance Company of America, has worked unceasingly in gathering, culling, condensing and classifying the vast array of information on this subject. The result of his labors is a book of 800 or more pages entitled, "The Mortality From Cancer Throughout the World," printed by the Prudential Insurance Company, and available for gratuitous distribution to libraries and to members of the medical and surgical profession.

This work will be of inestimable value to the profession as a reference book in giving one that thorough perspective of the whole cancer situation, so necessary to the clear cut understanding of one's individual duties in the world-wide offensive campaign against cancer.

It is manifestly impossible to abstract the book in this department of The Journal. We wish, however, to commend it to our readers, and to quote as justification of its existence, just two sentences from Mr. Hoffman's preface, "Limited to ages forty-five and over, the ordinary experience of the company (The Prudential) for the year 1914 shows that of the deaths of males 9.6 per cent were from cancer, and 18.6 per cent of the mortality of females."

This shows cancer to be the leading cause among females. Further on, Mr. Hoffman says, "The main results of the investigation may be summed up in the brief but extremely suggestive statement that the actual frequency of malignant disease throughout the civilized world has been ascertained to be much more of a menace to the welfare of mankind than has generally been assumed to be the case, and that in contrast to a marked decline in the general death rate, cancer remains one of the few diseases actually and persistently on the increase in practically all of the countries and large cities for which trustworthy data are obtainable."

SECOND ANNUAL MEETING OF THE INTERSTATE ASSOCIA-TION OF ANESTHETISTS.

The Second Annual Meeting of the Interstate Association of Anesthetists will be held at the Hotel Seelbach (Red Room), Louisville, Ky., July 26th and 27th, in conjunction with the National Dental Association.

The following program has been arranged for the scientific sessions:

Address of Welcome and Presentation of Gavel, L. S. McMurty, Louisville, Ky.; Chairman's Address: Progress in the Technical Administration of Anesthesia and Analgesia, Wm. Hamilton Long, Louisville, Ky.; Anesthesia, the Anesthetist and the Operative Procedure from the Surgeon's

Viewpoint, F. G. DuBose, Selma, Ala.; Metabolic and Organic Changes Under Anesthesia, Evarts Graham, Mason City, Ia.; Preparatory, Anesthetic and Postoperative Regime for Hazardous Risks in Genito-Urinary Surgery, Moses Salzer, Cincinnati, O.; A New Method for the Production of General Analgesia and Anesthesia, D. E. Jackson, St. Louis, Mo.; Nitrous Oxid-Oxygen in Obstetrics, Carl H. Davis, Chicago, Ill.; Ethel-Oil Colonic Anesthesia in Head and Neck Operations, Joseph E. Lumbard, New York City; Some Direct and Indirect Dangers of Nitrous Oxid-Oxygen and Its Ultimate Position in Major Surgery, Jno. N. Heim, Louisville, Ky.; Oral Hygiene in Relation to Anesthesia and Analgesia, Bion R. East, Detroit, Mich.; Control of Circulatory Disturbances Under Anesthesia and Analgesia, Emmett F. Horine, Louisville, Ky.; Historical Section: Hewett of Chicago, and Chloroform Analgesia, Wm. Harper DeFord, Des Moines, Ia.; Crawford W. Long and Ether, E. M. Magruder, Charlottesville, Va.; The Romance of Evans and Nitrous Oxid, Edward C. Kirk, Philadelphia, Pa.; Hickman, a Forgotten Pioneer, C. J. S. Thompson, London, England.

An innovation will be a Special Section of Dental Anesthetics, for which the association will adjourn to MacCauley's Opera House. The special program for this joint session with the National Dental Association will be as follows:

Introductory, Wm. Mamilton Long; Chairman's Address: Anesthesia and Analgesia in the Curriculum, the Clinic and Private Practice, Hugh W. MacMillan, Cincinnati, O.; Oral Operations Under Nitrous Oxid-Oxygen Anesthesia in the Forward-Inclined, Sitting Posture, Ira O. Denman, Toledo. O.; Vapor Anesthesia for Oral Surgery, Truman Brophy, Chicago, O.; Intra-Oral Methods of Local Anesthesia, Rich. H. Riethmuller, Philadelphia, Pa.; Extra-Oral Methods of Local Anesthesia, Kurt H. Thoma, Boston, Mass.; Hand-

ling Emergencies Under Anesthesia and Analgesia, N. T. Yager, Louisville, Ky.

The Association Dinner will be served at the Hotel Seelbach and a number of prominent after-dinner speakers will enliven the occasion with their wit and humor. Special entertainment will be provided for all lady guests attending the Louisville meeting.

For further information and dinner reservations address

F. H. McMechan, M. D., Sec.-Treas., Avon Lake, O.

Proceedings of the Forty-Third Annual Meeting of the Florida Medical Association

Held at Arcadia, May 10-12, 1916

Wednesday, May 10, 1916.

The general Association was called to order at 11 a. m. by Dr. John A. Simmons, Chairman of the Committee on Arrangements.

Following the invocation delivered by the Rev. George F. Scott, the Chair introduced the Hon. C. H. Mitchell of Arcadia, referring to him as "the old man eloquent of De-Soto county." On behalf of the city of Arcadia, Mr. Mitchell delivered a stirring address of welcome to the Association. He was followed by Dr. M. L. Crum of Bowling Green who, in behalf of the DeSoto County Medical Society, extended a further welcome to the organization. Dr. Graham E. Henson of Jacksonville delivered a short address of response in behalf of the Association.

The President, Dr. R. H. McGinnis of Jacksonville, took charge of the meeting and called for the reports of the officers.

They were presented as follows:

Secretary's Report.

To the President and Members of the Florida Medical Association:

Gentlemen—At the forty-second annual meeting of the Florida Medical Association there were reported twenty-six county societies organized with a total membership of five hundred and twenty-four. During the past year our membership has reached a total of six hundred and twenty-one. Your Secretary called the attention of the Advisory Committee to the fact that it had been the custom for many members to allow their membership to lapse for nonpayment of dues, in the vast majority of instances due to oversight—or procrastination—and requested this committee to authorize him

to carry such delinquents for a period of one year. This authority was granted, and the general condition of our organization shows the policy to have been a wise one. Our official organ, The Journal of the Florida Medical Association, a separate report being submitted concerning the publication, is, in the writer's opinion, doing much to interest the medical profession throughout the State in organized medicine. Thirty-one counties have maintained societies during the past year, and at the time of writing, twenty-five county secretaries have submitted their annual reports, leaving six to be heard from.

All of which is respectfully submitted.

GRAHAM E. HENSON, Secretary.

Financial Statement of the Journal of the Florida Medical Association.

Florida Medical Association.						
RESOURCES.						
Balance cash last annual report\$145.54						
Pro-rata subscriptions Association mem-						
bers 520.00						
Furniture 96.66						
Accounts receivable last annual report 315.50						
Earnings from advertisements:						
May\$104.00						
June 111.16						
July 130.16						
August 126.16						
September 114.00						

November	101.17
December	93.17
January	99.50
February	91.50
March	94.50
April	99.01—\$ 1,267.33
Pro-rata subscriptions Association	on

October 103.00

DISBURSEMENTS.	
Expense vouchers attached	\$1,838.45
Commissions	84.39
Interest and discount	19.50
ASSETS.	
Furniture	\$ 96.66
Accounts receivable	646.17
Cash on hand	10.86

\$2,696.03

GRAHAM E. HENSON, Secretary-Editor.

The following letter was read by the Secretary-Editor:

Снісасо, Мау 4, 1916.

Dr. Graham E. Henson, Journal of Florida Medical Association, Jacksonville, Fla.:

DEAR DOCTOR—We think the physicians of your State have reason to be pleased with the JOURNAL you are giving them. It is printed on exceptionally good paper, contains fifteen pages of advertising, and a variety of medical articles and news that should,make it worth while for every physician in your State to read it.

If we might be allowed a suggestion, we would recommend using a column of notes on news about physicians, such as marriages, deaths, birth of children, change of location, etc. Also reports of County Medical Societies. We presume you can obtain some of the latter. This field can be cultivated.

The Bureau is pleased to note we contributed to your April issue about six pages of advertising. As advertising helps to supply the "sinews of war," we trust your members will patronize the advertisers. This is the word, together with our commendation of your excellent JOURNAL, we would contribute to what, we hope, will be a very successful convention meeting next week at Arcadia.

Very truly yours,

Cooperative Medical Advertising Bureau, E. W. Mattson, Adv. Mgr.

Treasurer's Report, Florida Medical Association, 1916.

Balance on hand 1915 Dues collected from additional members	\$ 1,626.30
secured during 1915-1916	228.00
Dues for ensuing year	1,053.00
	\$2,907.30
By expense account as per vouchers	1,497.63
Balance on hand	. \$1,409.67
Course E IIa	

Graham E. Henson, Treasurer.

Moved by Dr. E. W. Warren and

seconded, that the Chair appoint a committee of two to audit the accounts of the Secretary-Editor and of the Treasurer. Carried.

The Chair appointed Dr. T. S. Field of Jacksonville and Dr. C. D. Christ of Orlando.

The following Councillor reports were accepted and received for information:

First District.

The Escambia County Medical Society has concluded the most successful year of its existence, every meeting (semi-monthly) being well attended, and an interesting pre-arranged program enjoyed by those present.

The meetings are being held in the spacious assembly room of the State Board of Health Laboratory building, and when subjects of public interest are discussed the citizens are invited to be present. A projection lantern has been purchased so that slides of interesting cases will be used in throwing pictures on the screen. A library has been started, and also pathologic specimens are being collected, each specimen will bear a concise description of the case on the container.

At the last meeting it was decided to hold a convention of the doctors residing west of Tallahassee (West Florida) with the view of discussing the advisability and feasibility of forming a district association. The convention will be held in Pensacola in the fall, and invitations will be sent all doctors in West Florida, as well as those living in contiguous territory in Alabama.

It was the Councillor's pleasure to meet with the Santa Rosa County Medical Society on Jan. 18, 1916, and to find that this society is a live wire and keeping up well with the times.

It was my misfortune not to have been able to meet with the Walton County Medical Society. It was learned, however, through one of its most active members, Dr. C. B. McKinnon, that the society is in good condition, and regular meetings were being held.

While the newly-created county of Okaloosa has not been officially placed by the House of Delegates in the First Councillor District, I got in touch with Dr. Porter Webb of Laurel Hill, and was informed that they had organized their county society, and had planned an "outing" at Camp Walton for May 2d.

I was greatly disappointed in not being able to accept their invitation to be with the society on this occasion.

It will be seen from this report that the First District is fully organized, and the county societies are engaged in effective work for the profession.

J. Harris Pierpont,

Councillor.

Second District.

The Second District, composed of Gadsden, Jefferson, Leon, Liberty and Wakulla counties, have only two active county societies.

The counties of Leon and Gadsden combined form the Leon-Gadsden county society. This also includes the physicians of Franklin county, making a goodly membership of active, interested physicians.

Jefferson county has a society composed of nearly all the eligible practicing physicians.

The other counties of this district are thinly populated, and haven't a sufficient number of physicians to form a society. They have been invited to unite with us, but thus far have not availed themselves of the privilege.

I regret my inability to be present. You have my best wishes for a most useful and pleasant meeting.

H. E. Palmer,

Councillor.

Fourth District.

As Councillor for the fourth district, I wish to make the following report:

In Duval county the county society is most flourishing, it has over one hundred members, and has held regular meetings during the past year.

In St. Johns county the medical society has kept up its organization as in the past.

Neither Clay nor Nassau county has any society at present. The Duval county society, however, has enrolled members from both of these counties.

GERRY R. HOLDEN, Councillor,

Sixth District.

The following report is submitted:

Hillsborough County—Number of members, 65; number of meetings this year, 10; number of papers this year, 17; clinical cases reported, 45.

Pinellas County—Membership, 27; all but 5 eligible physicians are enrolled. Number of meetings, 10; average attendance, 12. The interest has been good and scientific papers of high merit have been read at all meetings.

Pasco County—Number of members, 6; eligible physicians, 8. No meetings for last three months.

Thos. Truelsen,

Councillor.

Eighth District.

The profession in the Eighth District is harmonious and for the most part prosperous. No new county societies have been organized since my last report. Baker and Levy counties have hardly enough physicians to maintain county societies. I have made an effort to induce the physicians in these two counties to join the societies of adjoining counties, but this has not been done to any considerable extent, although the Alachua county society has several members from Levy county. The Putnam and Bradford county societies are only moderately active. However, they keep up their organizations.

The Alachua county medical society, with between 25 and 30 members, continues to be one of the most active societies in the district. Meetings are always held regularly on the meeting dates and are well attended. I cannot speak too highly of the splendid organization of the society. It is a credit to the profession.

J. H. Hodges, Councillor.

Tenth District.

Through the efforts and push of DeSoto County Medical Society I visited the principal towns in Lee and Polk counties and consulted with every physician I could find, to induce those living in Lee county to organize a Lee County Medical Society, which they promised me they would do, but did not. DeSoto County Medical Society, through the missionary spirit which prevails among its members, invited the physicians in Lee and Polk counties to meet with the DeSoto County Medical Society at Bartow and organize a Tri-County Medical Society, which they did. The Tri-County Medical Society has had two successful meetings, at Bartow and Fort Myers respectively, and at each meeting some very interesting and valuable papers were read.

Y. E. WRIGHT, Councillor.

Eleventh District.

The Dade County Medical Society is wide awake and active in lines of work relating to their society's welfare both from a scientific and practical standpoint. You will find enclosed a letter from Dr. G. H. Benton, Secretary of Dade, which is of considerable interest and I know you will enjoy reading it.

I think we must get together in an effort to reorganize the Palm Beach County Society. Can you give me the name of a former member of that society whom we can count on for energetic work in reorganization? I would like to correspond with him and then go up there in the fall to help them along.

You will note what Doctor Benton has to say regarding the formation of a new society in Broward county. I will try to get in touch with those active in it, and in the meantime will

you try and gather some information about them?

We have started a new feature in the Monroe County Medical Society that has increased interest of the members. It is a study of Doctor Cabot's Clinical Cases which are regularly received by the Secretary. These cases are read and fully discussed without the members knowing the correct diagnosis.

Each member is requested to give a diagnosis with the reasons therefor, which causes spirited discussion and adds to the interest aroused from discussion of cases that may come up in our own practice.

Meetings are held in turn at the homes of the members, and refreshments are served by the host.

All but two of the practicing physicians in the county are members of the society, one of these is a Cuban physician that we cannot induce to join, although repeatedly urged to do so. The other is a negro and ineligible.

Neither of these physicians are hostile to our interests.

Any advice or information relative to Broward or Palm Beach counties will be gratefully received.

WM, R. WARREN.

Councillor.

William R. Warren, M. D., Councillor Eleventh District. Florida Medical Association. Key West, Fla.:

Dear Doctor Warren—The activities of the Dade County Medical Society are on the whole rather good. Meetings are called regularly on the first and third Thursday evenings of each month and considering the small number of physicians and the large area covered in this county the attendance is good. The Scientific Committee has been concerned in arranging a scientific program for each meeting with desirable papers somewhat along the plan of a postgraduate work, with a paper and an alternate for each program in case one man is detained too late to notify the committee.

During the present year much clinical material has been submitted and conditions and aspects fully discussed and explained.

The society also has done much generally and especially through the work of committees and the personal efforts of Doctors Jackson, Jones, North, Sayles and others in getting the immediate construction of the new city hospital which is to us an affair of no little moment. It is to be built on a twenty-acre tract of land one and one-fourth miles from the centre of the city, is of the pavilion plan, at an expense when completed of \$115,000.00. The administration building and certain wards are to be constructed this

summer, and others are to follow as they are demanded.

The society has increased by election of new members relatively twenty per cent, in spite of the withdrawal of the former members who now are residents of Broward county and contemplate forming their own society.

The work of the Board of Censors has been excellent and characterized by persistent vigilance in acquiring evidence against a most unworthy quack who appeared late in the year of 1915 and who they find had a most unsavory reputation in many parts of the United States where he has remained for short intervals. Full report of this man and his reputation will be sent to the JOURNAL later when fully completed so as to warn the members of the profession against him, He is both slick and slippery and is liable to appear in any community in the State at any time.

Dade County Medical Society, Per G. H. Benton, M. D., Secretary and Treasurer.

The General Association stood adjourned, the President calling the House of Delegates to order at 12:30 p. m. Upon motion of Dr. Graham E. Henson, duly seconded, the calling of the roll of delegates was dispensed with. Carried.

The Chair directed that the report of the Special Committee, consisting of Drs. J. H. Pierpont, R. H. McGinnis and Graham E. Henson, appointed at the last annual meeting for the purpose of drawing up certain proposed amendments to the Constitution and By-Laws of the Association, be taken from the table. The proposed changes and amendments in the Constitution and By-Laws were taken up seriatim and adopted without a dissenting vote.*

Dr. J. K. Simpson of Jacksonville offered the following amendment to the Constitution:

That section three, article eight, reading:

"The officers of this Association shall be elected by the Association on the morning of the second day of the annual session at 11 o'clock and any member shall be eligible to any office named in

^{*}Note.—As the report of this committee was published in full in The Journal of June, 1915, Vol. I, No. 12, a repetition is avoided at this time.—Editor.

the preceding section, but no person shall be elected to such office who is not in attendance on that annual session (except the Councillors) and who has not been a member of the Association for two years."

Be amended to read:

"The officers of this Association shall be elected by the Association on the morning of the second day of the annual session at 12 o'clock, and any member shall be eligible to any office named in the preceding section, but no person shall be elected to such office who is not in attendance on that annual session (except the Councillors), and who has not been a member of the Association for two years."

In accordance with the Constitution the proposed amendment was tabled until the next annual meeting.

The following telegram was read by the Secretary:

Florida Medical Association, Arcadia, Fla.:

My wish is that you are having a great meeting. We are expecting a big delegation of Florida doctors to our Atlanta meeting in November; come help make it a great meeting. My best wishes for your every member.

Seale Harris,

Secretary Southern Medical Association.

The Secretary was directed to acknowledge and to thank Dr. Seale Harris for his cordial message.

It was moved by Dr. J. W. West of Live Oak, and seconded, that the dues of all delinquent members from Suwanee county be remitted. After considerable discussion, after which the Secretary-Editor explained that in accordance with a decision of the Advisory Committee, all delinquents were carried for one year, it was moved by Dr. Graham E. Henson, and seconded, that the motion be tabled. Carried.

The following resolution offered by Dr. F. J. Walter of Daytona during the 1915 meeting was, on motion of Dr. Walter and duly seconded, taken from the table:

Resolved, That a copy of the rules and regulations relative to medical defense in alleged malpractice suits, presented and endorsed by the Volusia County Medical Society, be incorporated in the By-Laws of this Society.

Following a general discussion, it was moved by Dr. R. R. Kime of Lakeland and

seconded, that the Chair appoint a committee of three to consider the advisability of adopting the resolution. Carried.

The Chair appointed Drs. Kime, Walter and Christ.

The Secretary read the following letter from the Escambia County Medical Society:

Pensacola, Fla., April 23, 1916.

House of Delegates, Florida Medical Society, Dr. Graham E. Henson, Secretary, Jacksonville, Fla.

Gentlemen—At the last meeting of the Escambia County Medical Society a resolution was passed relative to the license tax imposed by the State upon physicians.

The Secretary was instructed to communicate with the other county societies of the State, and urge them to cooperate with this society in an effort to get relief from this tax.

You are therefore requested to take action favorable to this plan, to instruct your delegates to the State society accordingly, and to make every effort to enlist the support of your senators and representatives.

It is urged that physicians often wait upon the needy sick with no expectation of pay. This is charity work. Furthermore, physicians cooperate, cheerfully for the most part, with the collection of vital statistics, and their services are essential to the safeguarding of public health. The abolition of the license tax would seem but a fitting recognition of these services.

The resolution further provides that a copy of this communication should be sent to the State Board of Health and one to the House of Delegates of the State Society, and that their cooperation be earnestly solicited.

Fraternally yours,
F. A. Brink, Secretary.

Moved by Dr. Graham E. Henson, and seconded, that the communication be referred to the Committee on Legislation and Public Policy. Carried.

Upon motion, the House of Delegates adjourned, subject to the call of the President.

The General Association was called to order at 2 p. m. by Dr. J. K. Simpson, Chairman of the Committee on Scientific Work. The following papers were read:

"The Interpretation of the Wassermann Reaction," W. P. Dey and G. E. Henson, Jacksonville. "The Diagnosis and Treatment of Syphilis," J. E. Gammon, Jacksonville.

"Lumbar Puncture and Examination of the Spinal Fluid," Ralph N. Greene, Chattahoochee.

Discussed by Drs. Henry Hanson, Edward Francis, John Long and L. W. Cunningham.

"The Correlation of Clinical and Laboratory Diagnosis of Diphtheria," H. Hanson. Discussed by Drs. Julian Gammon and John Long.

"Creeping Eruption." G. H. Edwards. Orlando. Discussed by Drs. J. F. Walter, E. W. Warren, C. D. Christ and R. H. Mc-Ginnis.

"The Necessity of Utilizing the Musculature in Perineal Repair," A. C. Ives, Tampa. Discussed by Dr. T. S. Field.

"Reentgenotherapy, With Special Reference to Certain Malignant Conditions, Tubercular Adenitis and Eczemas," J. P. Long, Lake City. Discussed by Dr. L. W. Cunningham.

The General Association adjourned until 9 a. m. Thursday.

The House of Delegates convened at 5 p. m., the President in the Chair. Dr. E. W. Warren took the floor and informally discussed the work of the Council on Medical Education of the American Medical Association, having been in attendance as a delegate from the Association at their midwinter meeting held in Chicago.

It was moved by Dr. Graham E. Henson, and seconded, that the expenses of Dr. E. W. Warren in connection with his attendance at the Council be ordered paid and that the President appoint a delegate to attend the next annual meeting of the Council. Carried.

Dr. John MacDiarmid informally discussed his attendance at the last annual meeting of the House of Delegates of the A. M. A.*

To the President and Members of the House of Delegates:

Gentlemen—Your committee appointed to audit the accounts of the Secretary-Editor and of the Treasurer beg to report that the audit has been completed and that all accounts are found correct.

> T. S. FIELD, M. D., C. D. CHRIST, M. D.,

Committee.

The following correspondence was read by the Secretary:

PENSACOLA, FLA., May 4, 1916.

Graham E. Henson, M. D., Secretary Florida Medical Association, Jacksonville, Fla.:

My Dear Doctor—Pardon my delay in answering your letter of April 27th.

In reference to the Park Trammell matter, I think I have given the facts brought out at the meeting in Tallahassee when Drs. Fernandez, Palmer and myself had a conference with the Governor. I wish you would make such use of the "Lest We Forget" article (if it can be called an article) as the wisdom of the House of Delegates or the officers should determine. As already stated, I feel that our Association has been insulted by a tricky politician, and that we have borne such insults in the past too meekly. Our only recourse in showing our righteous resentment seems to me to lie in attempting to defeat the ambition of these professional politicians. This is my view, however, and it may be the wrong feeling, but I am prepared to stand by my guns until they are shot away by the enemy.

Yours very truly,

J. HARRIS PIERPONT.

"LEST WE FORGET."

Editor Florida Medical Association Journal:

Now that the political campaign to select a successor to Senator Bryan is on, it might not prove unprofitable for the members of the Florida Medical Association to be reminded of an episode which occurred in the Governor's office some three years ago when our late lamented secretary, Dr. Fernandez, Dr. Palmer and myself called upon Governor Trammell to discuss with him the then pending medical examining board bill.

It will be remembered that the bill contained a section which provided that the Governor should appoint members of the board—if the bill succeeded in passing—upon recommendation of the respective State medical associations. This provision was explained to the Governor, as it apparently would deprive him of his constitutional authority, and likewise preclude the possibility of a governor "playing politics." As was well known the Florida Medical Association has

^{*}Dr. MacDiarmid's full report was published in The Journal, Vol. II, No. 3, p. 84.

labored for years to keep politics out of medical legislation, and we were beginning to believe our fond anticipations would shortly be realized. The Governor even went so far as to ask that a list of eligibles, from which he could make his appointments, be furnished him by the Association, in the event that the pending bill should not pass. With this assurance a report was made to the Association when it convened about a month later at Miami.

The Association appointed a committee of five members to canvass the membership with the view of selecting the men best suited to serve on the medical examining board.

After mature consideration, it was deemed wise not to hamper the Governor in sending him only seven names for appointment to fill the seven vacancies, but to increase the number to twenty-one—three from each district—which would not in any manner embarrass him, if he was sincere in his desire to appoint men acceptable to the medical profession, and not some political pet, as is so often done.

Dr. Fernandez sent the list containing twentyone members of the Association to the Governor, and we confidently expected the appointment of the members of the examining board from this list.

It is for you to determine whether or not the Governor kept his word when it was soon known that only *four* out of the seven members of the new board were endorsed by our Association, the other three being political appointments.

Shall we, or shall we not, endorse such action at the polls in the approaching primary?

J. HARRIS PIERPONT, M. D.

Pensacola, Fla., April 15, 1916.

Following considerable discussion, it was moved by Dr. J. K. Simpson, and seconded, that the matter be tabled. Carried.

Mrs. Anna W. Riggin, representing the Woman's Temperance Union, was accorded the floor. She asked for the adoption of the following resolutions:

Whereas, After more than half a century of experimental scientific research, many of the greatest physicians of Europe and America have declared alcohol unqualifiedly "nil" as a remedial agent and, instead a narcotic, irritant and depressing poison to the brain and other tissues and directly or indirectly responsible for a large proportion of the insane, epileptic, feeble-minded and other forms of mental, moral and physical degeneracy, and

WHEREAS. Whiskey, brandy and wines have

been stricken from the U. S. Pharmacopeia, and Whereas, It is the sacred duty of physicians to prevent as well as cure disease; therefore, be it

Resolved, That the Florida State Medical Association endorses the action of the Neurologists and Alienists of America, also the States of North Carolina and West Virginia in their resolutions against the use of alcohol, and hereby pledges its earnest efforts against the deadly foe to mind, body and soul.

After considerable discussion, it was moved by Dr. Graham E. Henson, and seconded, that the resolutions be referred to the Committee on Scientific Work. Carried.

The following set of resolutions prepared by the Woman's Club of Jacksonville was read by the Secretary:

Whereas, The attention of the Legislation Department of the Woman's Club of Jacksonville has been called to the prevalence of advertising in the local and State press, giving publicity to various nostrums to be used for criminal purposes, and also to remedies and treatments purporting to cure social diseases, and to alleged maternity homes for unfortunate women; and,

Whereas, We believe such advertising tends to corrupt the morals of any community and defraud the suffering ones; and,

WHEREAS, The Florida Medical Association is about to convene in annual session,

Be it resolved, by the Woman's Club in session assembled, That a communication be sent to the Florida Medical Association calling attention to the prevalence and corrupting influence of such advertising, and requesting them to unite with the Woman's Club of Jacksonville in presenting to the 1917 session of the Florida Legislature a bill making such advertising illegal; and,

Be it further resolved, That this bill be prepared by the Legislation Department of the Woman's Club of Jacksonville, and submitted to the Legislation Committee of the Florida Medical Association for endorsement, and presented through the Legislation Department of the Florida Federation of Women's Clubs to the 1917 session of the Florida Legislature for consideration.

Respectfully submitted,
(Signed) Mrs. Frank E. Jennings,
President Woman's Club;
Mrs. Fred B. Noble,
Chairman Legislation Committee.

Upon motion, duly seconded and carried, the resolutions were ordered spread upon the minutes of the Association, and were referred to the Committee on Legislation and Public Policy.

The House of Delegates stood adjourned subject to the call of the President.

THURSDAY, MAY 11TH.

The General Association was called to order by Dr. J. K. Simpson, Chairman of the Committee on Scientific Work, at 9 a. m. The following papers were read:

"Unrecognized Nasal Diphtheria," U. S. Bird, Tampa. Discussed by Drs. Henry Hanson, Graham E. Henson, J. E. Garner, W. S. Gramling, M. G. Chancey, T. S. Field, C. D. Christ, A. W. Ives, L. L. Oppenheimer, E. Van Hood and Wilhovet.

"Observations on the Action of Calomel," L. S. Oppenheimer, Tampa. Discussed by Drs. U. S. Bird, M. G. Chancey, E. W. Warren, M. L. Crum, W. S. Gramling, and John MacDiarmid.

"Diagnosis and Treatment of Eye-strain," J. W. Taylor, Tampa. Discussed by Drs. F. J. Walter, U. S. Bird, and Graham E. Henson.

"Reentgen Diagnosis of Renal Calculus: Results of One Hundred Twenty-seven Examinations," L. W. Cunningham. Discussed by Drs. J. K. Simpson, T. S. Field, Julian Gammon and R. R. Kime.

"Pyelography as an Aid to Kidney Diagnosis," H. A. Peyton and E. Jelks, Jacksonville. Discussed by Drs. L. W. Cunningham, J. K. Simpson and Harry Peyton.

"Pyelitis of Infancy, With Special Reference to Its Occurrance During the Course of the Infectious Diarrheas," J. W. West, Live Oak. Discussed by Drs. Graham E. Henson, Harry Peyton and Julian Gammon.

"Malarial Hemoglobinuria, Treatment of," K. Cross, Crystal River. Discussed by Drs. Ralph Greene, E. Van Hood, Henry Hansen, G. Edwards, John Simmons and Harry Peyton.

The President assumed the Chair at 12 m., announced that the election of officers

for the ensuing year was in order and called for nominations for the office of President.

Dr. John MacDiarmid placed in nomination the name of Dr. E. W. Warren of Palatka. The nomination was seconded by Drs. L. S. Oppenheimer, W. S. Grambling and M. G. Chancey.

Dr. F. F. Ferris placed in nomination the name of Dr. Ralph N. Greene of Chattahoochec. The nomination was seconded by Drs. W. P. Dey and W. M. Bevis.

The Chair apointed Drs. F. J. Walter and T. S. Field to act as tellers.

The ballot was ordered spread. Dr. E. W. Warren receiving thirty-five votes; Dr. Ralph N. Greene twenty-five.

Upon motion of Dr. Ralph N. Greene, seconded by Dr. F. F. Ferris, the election of Doctor Warren was declared unanimous.

The Chair appointed Past Presidents J. Y. Porter of Key West and John MacDiarmid of DeLand a committee to escort the newly elected President to the Chair.

Doctor Warren spoke in a feeling manner of the honor bestowed upon him and asked for the unanimous support of the entire membership during the ensuing year in the interests of organized medicine.

Dr. John MacDiarmid, upon recognition from the Chair, in a beautiful speech, presented the retiring President, Dr. R. H. McGinnis, with a Past President's emblem.

Nominations for the first vice presidency being called for by the Chair, Dr. Graham E. Henson placed in nomination the name of Dr. John Simmons of Arcadia. The nomination being seconded and there being no further nominations, in accordance with the Constitution, the Secretary cast the ballot of the Association for Dr. John Simmons, who was then declared elected.

Dr. G. Edwards placed in nomination the name of Dr. E. Van Hood of Ocala for Second Vice-President; the nomination being seconded, and there being no further nominations, the Secretary cast the ballot of the Association for Dr. E. Van Hood, who was then declared elected.

Dr. F. J. Walter placed in nomination the name of Dr. John P. Long of Lake City for Third Vice-President. The nomination being seconded and there being no further nominations, the Secretary cast the ballot of the Association for Dr. John P. Long, who was then declared elected.

Dr. Graham E. Henson placed in nomination the name of Dr. John MacDiarmid of DeLand to serve as Delegate from the Association to the House of Delegates of the American Medical Association. The nomination being seconded and there being no further nominations, the Secretary cast the ballot of the Asociation for Dr. John MacDiarmid, who was then declared elected.

The terms of office of the Councillors from the first, eighth and tenth districts having expired, the following were unanimously elected to serve in their respective districts for the term of four years:

First District—Dr. J. Harris Pierpont, Pensacola.

Eighth District—Dr. A. H. Freeman, Starke.

Tenth District—Dr. R. L. Cline, Arcadia. Upon motion, duly seconded, Dr. W. C. Page of Live Oak was elected Councillor of the Third District to fill out the unexpired term of Dr. C. L. Brown, deceased.

The next order of business being the selection of a meeting place for the next annual meeting, the Secretary read the following communications:

ATLANTIC BEACH HOTEL,

Atlantic Beach, Fla., May 9, 1916.

To the President, Secretary and Members of the Florida Medical Association:

Gentlemen—I herewith extend you a hearty welcome to the Atlantic Beach Hotel, Atlantic Beach, Fla., as your next meeting place.

I feel it is needless to say that Atlantic Beach is the ideal place to hold conventions as the number that are now being held here—with quite a few making it their permanent meeting place—speaks for itself. The convention hall is situated at the end of the spacious veranda of the hotel and is but a few feet from the ocean, assuring a cool breeze at all times.

I shall feel very much honored if you vote for

Atlantic Beach for your next convention and will do everything possible to make your stay a pleasant one.

Descriptive booklets of the Atlantic Beach Hotel with its golf courses are available in your convention hall.

Very truly yours,

H. M. STANFORD, Lessee and Manager.

Tallahassee, Fla., May 10, 1916. Dr. W. F. Ferris, State Medical Association, Arcadia, Fla.

A resolution was passed by the county society endorsing the establishment of a permanent meeting place for the State association at Atlantic Beach. If the establishment of a permanent meeting place is not considered this session, I invite the Association to Tallahassee for its next meeting in the name of the county society. I am wiring this invitation from the City and Boosters' Club in your care. Am sorry I can not come to the meeting.

F. C. Moor.

It was moved by Dr. Graham E. Henson, and duly seconded, that the privileges of the floor be extended to Mr. H. M. Stanford of the Atlantic Beach Hotel. Carried.

Mr. Stanford extended a cordial invitation for the Association to meet at his seaside resort and informally discussed the advantages of this resort as a meeting place for conventions,

Dr. C. D. Christ moved that Atlantic Beach be made the permanent meeting place of the Association. The motion was seconded and a general discussion followed. An amendment was offered by Dr. Graham E. Henson that the Association accept the invitation of Mr. Stanford to meet at the Atlantic Beach Hotel next year, that the question of making the resort the permanent meeting place of the Association be deferred, and the time of meeting of the forty-fourth annual session be left with the Executive Committee. The amendment was duly seconded and carried.

Dr. T. S. Field moved that a vote of thanks be tendered the Committee on Scientific Work for the excellent program prepared under their supervision. The motion was duly supported and carried unanimously.

Telegrams were read by the Secretary from Drs. C. P. Rogers, H. O. Byrd, W. R. Warren, and Mary Freeman, expressing their regrets at being unable to attend the meeting.

Dr. John MacDiarmid offered the following resolutions:

Resolved. That the Florida Medical Association, in convention assembled, hereby extends its sincere thanks to the DeSoto County Medical Society for the warm reception given us and the excellent entertainment provided for us; the mayor and city of Arcadia for their hearty welcome and hospitality; the press and High School authorities for their many courtesies, and the citizens of Arcadia generally for uniform kindnesses.

Upon motion, duly seconded, the resolutions were adopted by a rising vote.

Upon motion, duly seconded, the Association stood adjourned.

The General Association convened at 2 p. m., Dr. J. K. Simpson in the chair.

The following papers were read:

"Some Fundamental Considerations in the Study of Valvular Heart Lesions," T. Truelsen, Tampa. Discussed by Dr. Graham E. Henson.

"Acidosis," R. H. Knowlton, St. Petersburg. Discussed by Drs. J. B. Wallace and Julian Gammon.

"Differential Diagnosis of Lesions in the Upper Right Quadrant," L. J. Effird, Tampa.

"Prominent Symptoms of Pancreatitis," M. G. Chancery, Tampa. Discussed by Drs. John Jelks, R. R. Kime, L. Swift Graham E. Henson, Julian Gammon and J. K. Simpson.

"Complete Efficient Surgery," R. R. Kime, Lakeland. Discussed by Drs. John Long and L. Swift.

"Advantage of Early Removal of Tumors of the Breast," L. F. Carlton, Tampa. Dis-

cussed by Drs. R. R. Kime and L. W. Cunningham.

"Fracture of the Neck of the Femur," J. Reeve, DeLand. Discussed by Drs. John Simmons, Sheldon Stringer and R. L. Cline.

"Indirect Inguinal Hernia," S. Stringer, Tampa. Discussed by Drs. John Reeve, John Simmons and R. L. Cline.

Upon motion, duly seconded, the General Association adjourned *sine die*.

The House of Delegates convened at 5 p. m., Dr. E. W. Warren in the Chair.

Dr. J. W. West offered the following:

Resolved, That henceforth no person will be admitted to the Florida Medical Association or to the county medical societies who has not passed the examination of the Regular Board of Examiners, and that all county societies be notified of the eligibility of such persons. Provided, that this resolution be incorporated in the By-Laws of the Association. Provided, that this resolution is not to apply to anyone already a member of the organization.

After a full and general discussion it was moved by Dr. Graham E. Henson and seconded by Dr. R. H. McGinnis, that the resolution be tabled. Carried.

Dr. M. L. Crum of Bowling Green took the floor and informally discussed the action of the DeSoto County Medical Society in admitting to membership an individual whom it has since become known is ineligible for membership.

Dr. J. K. Simpson moved the adoption of the following resolution:

Resolved, That the Executive Committee of the Florida Medical Association be directed to investigate the question of admitting eclectic physicians to membership in the Association, and that they report their findings at the next annual meeting.

The motion being seconded, the resolution was adopted by a unanimous vote.

Upon motion, duly seconded, the House of Delegates adjourned *sine die*.

Reviews from Current Literature

IMPACTION OF HIP FRACTURE

Cotton, Frederick J.: Artificial Impaction of Hip Fracture. Annals of Surgery, Vol. LXIII, 1916, p. 366.

The writer divides fractures of the hip joint as follows:

- "1. Fractures at the base of the neck ('extracapsular fractures'), which are going to unite anyhow, with good or bad treatment; which may show great deformity and consequent disability, but practically never fail to unite.
- "2. Neck fractures proper (intracapsular fractures) in which the head may be mobile, and is always ill-nourished and ill-fitted for any share in the necessary repair."

He states that intracapsular fractures may be impacted, or merely entangled, or loose, that the loose fractures never unite under routine treatment, and that entangled or loosely impacted fractures are apt to loosen up and to eventually show nonunion. He states that all well-impacted fractures always unite by bony union, though often with deformity.

Arguing that unimpacted fractures of the neck never unite by bone, and that well-impacted fractures always unite, he suggests the conversion of unimpacted fractures into impacted fractures by artificial means. His results apparently justify his theory.

The technique of artificial impaction is as follows: The patient is lightly anæsthetized and placed on a table; with the stockinged foot in the perineum, the leg is dragged down until the lengths of the two limbs are alike and until rotation gives slight crepitus; eversion is then corrected, the leg handed to an assistant while another assistant gives counterpressure on the other side of the pelvis. The trochanter is then padded heavily with felt and pounded with a large wooden mallet until there is a sensation of "giving." The fact of impaction is proven by the loss of mobility in rotation when the

leg is released. The limb is then put up in an abduction plaster spica. Usually immobility is continued for six to eight weeks. The patients are not allowed to walk under three months. From the third to the sixth month the joint is mobilized and the patient taught to walk with crutches. During this time nearly all the motion should be regained.

R. C. T.

WARMED ETHER VAPOR

McCarty, Franklin B. and Davis, B. F.: The Use of Warmed Ether Vapor for Anæsthesia. Annals of Surgery, Vol. LXIII, 1916, p. 305.

The writers conducted an extensive series of experiments to determine whether ether vapor warmed to body temperature possessed any advantages over ether vapor as ordinarily administered. The following conclusions coincide with the views of surgeons generally:

- "1. The amount of heat required to warm ordinary ether vapor as used in anæsthesia by the open or closed methods, or by intrapharyngeal or intratracheal insufflation to body temperature is so small as to be a negligible factor in lowering body temperature and inducing shock in anæsthetized patients.
- "2. The warming of ether vapor, however administered, is accomplished in the mouth, pharynx, trachea and primary bronchi, and the anæsthetic reaches the aveoli at body temperature.
- "3. The quantity of ether required to produce and maintain anæthesia does not appear to be materially influenced by warming ether.
- "4. So-called cold ether vapor does not appear to be more irritating to mucus membranes than warmed ether.
- "5. No more mucus and saliva is secreted when anæsthesia is induced and maintained with cold than with warmed ether." R. C. T.

D'ESPINE'S SIGN IN CHILDHOOD

Morse, John Lovett: D'Espine's Sign in Childhood. Am. Journal Diseases of Children, April, 1916, Vol. II, p. 276.

This sign is less often present in children of the well-to-do than in those of the poorer class, and when present in this former class is by no means always a sign of tuberculosis. By D'Espine's sign is meant the tracheal voice or bronchial breathing heard over the spinal column below the seventh cervical vertebra. Normally the tracheal voice ceases abruptly at about the seventh cervical or first dorsal vertebra, and when heard below this point it indicates that there is some tissue, usually lymph nodes, between the trachea and vertebral column which transmits the bronchial sound unchanged.

D'Espine was wrong in his conception that his sign, when present, always indicated tuberculosis of the bronchial glands.

According to the author's tabulated report the sign when found in children of the well-to-do classes probably does not indicate tuberculosis in more than 50 per cent of the cases. It merely indicates enlarged lymph nodes which may be due to other causes than tuberculosis. Among the causes are bronchitis, recent broncho-pneumonia, pertussis, asthma, enlarged tonsils, influenza, frequent colds and possibly other diseases and conditions. Among the poorer classes the presence of a positive D'Espine sign more frequently is an index of tuberculosis.

J. D. L.

APPENDICITIS IN CHILDHOOD

Wachenheim, F. L.: A Contribution to the Diagnosis of Appendicitis in Childhood. Archives of Pediatrics, March, 1916, Vol. XXXIII, p. 197.

Appendicitis is largely a disease of early life and it is likely that most adult cases had their foundation laid in childhood. It is more apt to be acute and subject to dangerous developments in early than in adult life, and at the same time the diagnosis is with more difficulty made. In about one-third of suspicious cases we are left in doubt as to the diagnosis.

Examination per rectum is a most valuable and often neglected diagnostic procedure. Its value, however, is subject to limitations, as errors are likely to be made both in determining the presence and absence of trouble with the appendix. In employing rectal examination valuable aid is furnished in the subjective sensations available in intelligent children. High palpation, per rectum, in the illiac fossa elicits tenderness and pain in the McBurney region when appendicitis is present, and never under normal conditions. In making the examination the greatest care must be employed in gaining the confidence of the patient, the exercise of patience and the avoidance of brutality. With the examining finger high in the right illiac fossa, the patient, if old enough and intelligent, will invariably locate the pain in the McBurney region if the trouble is appendicular. T. D. L.

DIPHTHERIA CARRIERS

Ott, Wm. O., and Roy, K. A.: Treatment of Diphtheria Carriers with Iodized Phenol. Journal A. M. A., March 11, 1916, p. 800.

The authors after noting the comparatively poor results obtained from the use of sprays containing the staphylococcus aureus and lactic acid bacillus have achieved marked success from the employment of undiluted iodized phenol. This consists of 60 per cent phenol, 20 per cent iodin crystals and 20 per cent glycerin. It is applied on a swab to the naso-pharvnx every forty-eight hours till negative cultures are obtained. Seventeen cases were treated and 64 per cent yielded negative cultures after from one to two applications. Only one case (nasal) was under treatment longer than eleven days. No bad results were reported from the use of the rather strong preparation, though care is enjoined to prevent it from coming in contact with the skin of the face or dropping back into the larvnx. The effect the application is to cause a escharotic membrane to form at the site of application, which lasts for about twentyfour hours. No explanation is offered as to how this preparation rids the throat of diphtheria organisms.

J. D. L.

PYORRHEA ALVEOLARIS

Webster, Fox L.: The Relation Between Surgical Operations on the Eyeball and Pyorrhea Alveolaris. Ophthalmology, Vol. XII, 1916, p. 517.

The author first notes the direct connection between the teeth and the eyes through the fifth cranial nerve "so that affections situated at the termination of its maxilliary branches may readily be referred to the terminal filaments of the ophthalmic branch, but inflammatory processes of the dental roots may also extend to the maxilliary sinus, and thence to the orbit by continuity or contiguity of tissue. However, any infection of the teeth may be transmitted through the lymph channels, and ultimately find lodgement in the vitreous of the eye." It is extremely important, therefore, in any operation upon the eye, to see that the patient is protected from this source of secondary The author quotes seven instances of cataract operations in which he is sure the eves were lost as a result of secondary infections due to pyorrhea alveolaris. Another case is mentioned in which a live infection showed in the eye within twentyfour hours of operation, and in which the eye was saved by the extracting of all infected teeth, followed by vigorous treatment of the gums.

He has not hesitated on several occasions, in which the gums were too deeply infected for satisfactory treatment, to have the teeth extracted as a preliminary to cataract operations. Conjunctivitis and iritis have been attributed to the teeth by different authors, and relief was obtained by the extraction of the offending members.

In conclusion he says, "It is obvious from data I have collected as well as from my personal experience, that we are not only dependent on our oral surgeons for help, but we must bring in the internest as well for special medication to help us eradicate that toxæmic condition which provokes such disastrous results in the surgical operations on the eve."

w. s. m.

DIAGNOSIS OF TUBERCULOSIS

J. Bronfenbrenner, Ph. D., Morris H. Kahn, M. D., J. Rockman, M. D., and Max Kahn, M. D., Ph. D.: Further Studies of Biological Methods for the Diagnosis of Tuberculosis. Archives of Internal Medicine, Vol. XVII, April, 1916, p. 492.

Bronfenbrenner, Kahn, Rockman and Kahn point out certain limitations in biological methods of diagnosis which tend to limit their specificity. Among these the Abderhalden, Widal and Wassermann reactions are mentioned. Experience shows that these methods have their limitations and negative reactions are only of relative value.

Biological methods of diagnosis of tuberculosis are difficult on account of the great sensitiveness of some of the reactions, such as the Von Pirquet test. The peculiar properties of the tubercle bacillus has made the preparation of an antigen for use in complement fixation a difficult task. Besredka's tuberculin has been used as antigen and gave positive results in 93 per cent of clinically tuberculous individuals. It also gave positive results in a number of individuals where there was no clinical evidence of the disease.

The lipins present have been found to interfere with the antigenic properties of tuberculin. The lipin can be removed by extraction with ether and the precipitation of the protein with acetic acid.

It was also found that different tuberculins gave different degrees of fixation due to the varying amounts of lipin present. Comparative values of different samples of tuberculin of Besredka showed a variation from 98 to 24 per cent of positive reactions in 25 cases of tuberculosis.

In many cases it was found that the early serological findings were later confirmed by clinical observations.

A number of different antigens were used and results discussed in comparison with the urochromogen reaction. The "Weisz reaction is not always incident in diseases characterized by tissue destruction." The urochromogen reaction is not pathognomonic of tuberculosis and is present in other diseases, such as typhoid, measles, etc.

These authors offer the following conclusions:

"Different samples of tuberculin of Besredka, though apparently identical in the mode of their preparation, may differ among themselves in their specific values.

"The most striking variation is in the amount of lipins contained in tuberculin.

"It is necessary to free each sample of tuberculin of all its lipin fraction before using such tuberculin for the complement deviation test.

"The lipins may be extracted by fat solvents, but the easiest method was found to be that of separation of the protein fraction by precipitation.

"Precipitation of the antigenic fraction of tuberculin also offers the possibility of using a standard number of units of antigen and thus eliminating variations due to the quantitative differences in specific properties of different samples of tuberculin, without increasing the chance of obtaining lipotropic reactions.

"It seems, however, that different samples of tuberculin may vary also qualitatively.

"The variation rests apparently on the fact of the existence of strain specificity in the antibody.

"The existence of strain specificity in tuberculosis may explain why the results obtained by different investigators in the complement deviation test for diagnosis of tuberculosis vary so much.

"The tuberculin of Besredka seems to give the best results in diagnosis by the complement deviation test.

"Even though the test is positive in a certain number of clinically non-tuberculous individuals, the reaction seems to be specific.

"The attempt to control serum findings

by the urinary examination for urochromogen was not successful in general because we were unable to confirm the frequent occurrence of the Weisz reaction in tuberculosis. A comparison of the frequency of occurrence of the two reactions in different stages of the disease suggests that negative serum findings in the face of the positive Weisz reaction may have an unfavorable prognostic significance." H. H.

GASTRO-INTESTINAL TRACT

Stewart, W. H.: Roentgen Diagnosis of Obscure Lesions of the Gastro-Intestinal Tract. Amer. Jour. of Roentgenology, Vol. III (new series, No. 4), April, 1916, p. 202.

"In order that we may be able to render valuable aid in the diagnosis of these lesions, especially the large number of border-line cases in which the patients suffer from pain and distress in the right upper abdominal quadrant and which may be caused by kidney, gall-bladder, duodenum or appendicular disease, it is necessary that every effort should be made to educate the medical profession to refer their cases to the roentgenologist for diagnosis and not to restrict his investigations to any one part of the gastro-intestinal tract. We have learned by experience that in genito-urinary examinations we can not rely on a negative diagnosis until the entire tract is covered; this rule applies as well to the digestive system where a negative diagnosis can not be accepted as final until the entire tract has been examined.

"It is our custom in these vague, indefinite cases to first go over the right kidney to exclude nephrolithiasis; this is followed by an investigation of the gall-bladder for evidence of cholelithiasis or adhesions; then continue our examination to the duodenum for signs of ulceration or adhesions and lastly to investigate the appendix, which, in many cases, will be responsible for the symptoms. One of the most recent advancements has been the detection of diverticula. That many vague and indefinite abdominal cases are due to diverticulitis has long been suspected, but the ability to recognize and

actually prove the existence of such pathology has only been in our hands since the perfection of the present technique of the roentgen examination of the gastro-intestinal tract."

L. W. C.

UTERINE FIBROMATA

Grier, G. W.: Roentgen Treatment of Uterine Fibromata. Interstate Med. Jour., 1916, Vol. XXLLL, p. 118.

Chief action is due to the effect on the ovaries, although Albers-Schoenberg believes that the tumor is affected.

The circulation of the uterus is influenced by the activity of the ovaries and the depressant action on them brings about the improvement. Kronig and Gauss have gone so far as to state that all fibroids over 39 years of age should be treated by rœntgenization instead of surgery, but it is generally recognized that the treatment is only indicated when operation is impossible or undesirable.

Indications: Extreme anemia, conditions of the heart, lungs and kidneys which will not admit of anesthesia, cases going through the menopause in which the mental state is bad in which the X-ray treatment facilitates the physiological progression.

Contraindications: Inflammatory pelvic conditions, submucous tumors, necrosis of tumors, malignancy, or when the patient is young and the production of the menopause is undesirable.

Menopause is gradual and the usual distress is milder. Menorrhagia is easily controlled while the retrogression in the tumor may be slow.

L. W. C.

MALIGNANT TUMORS

Holding, A. W.: Roentgen Deep Therapy in Malignant Tumors. Amer. Jour. of Roentgenology, Vol. III (new series, No. 4), April, 1916, p. 191.

Cases observed at the General Memorial Hospital. Malignant tumors of different types and their metastases give symptomatic cures with Roentgen deep therapy. This means the use of the Coolidge tube giving large doses of hard rays through a heavy filter and coagulation of the tumors by heat when indicated.

Six to seven per cent of symptomatic cures in inoperable cases are secured. This is small but otherwise the outlook is hopeless.

"Symptomatic Cures: (A) 100 per cent of the non-malignant diseases. (B) 100 per cent of the superficial malignant diseases. (C) In conjunction with surgery to improve over 70 per cent of the deep operable diseases. (D) To improve the condition of 20 to 30 per cent of the hopeless inoperable cases."

One of Dr. Holding's conclusions: "If these physical methods ameliorate the symptoms in hopeless cases, patients having operable lesions should not be denied the benefits of these physical methods after operation."

Two tumors not before reported in the literature are markedly ameliorated: Carcinoma of the testis of teratoid origin and carotid gland tumor.

L. W. C.

NEW AND NONOFFICIAL REMEDIES.

Since the publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

STYRACOL TABLETS, 5 GRAINS. — Each tablet contains 5 grains styracol. Merck and Co., New York,

TANNALBIN TABLETS, 5 GRAINS.—Each tablet contains 5 grains tannalbin. Merck and Co., New York.

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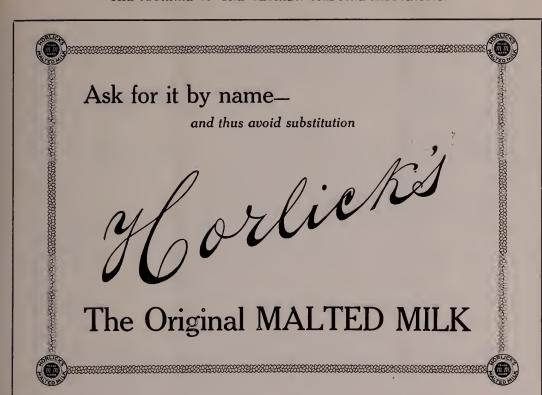
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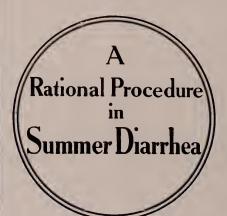






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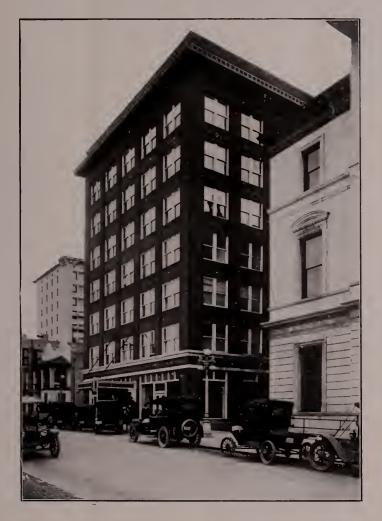
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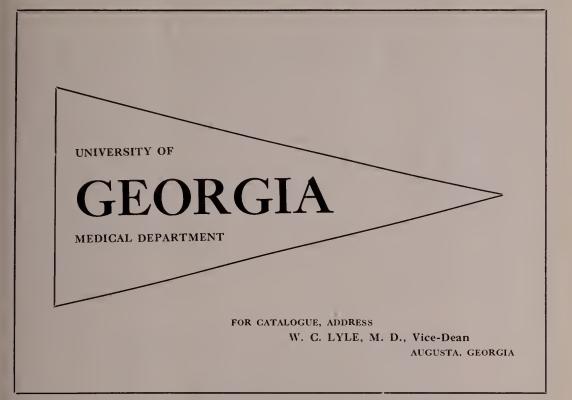
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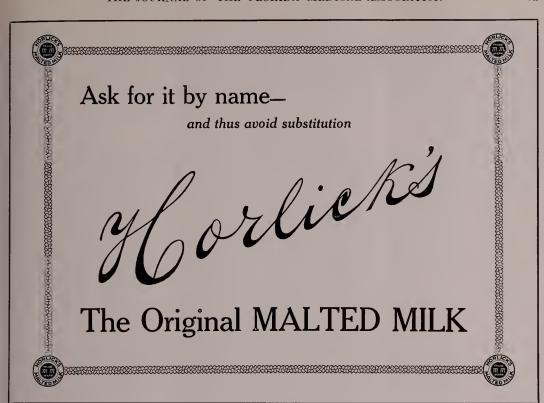
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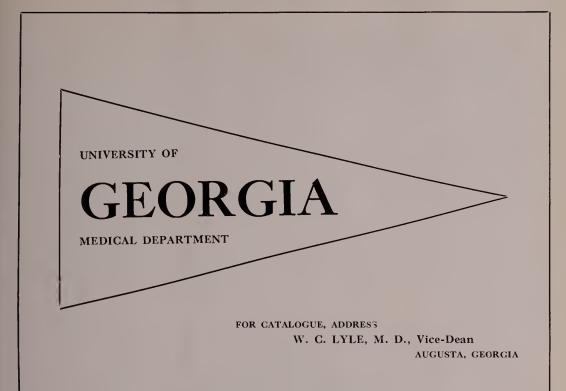
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Florida Medical Association

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VOLUME II

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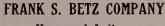
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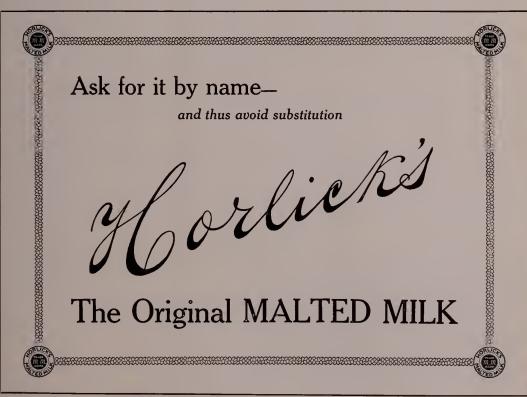


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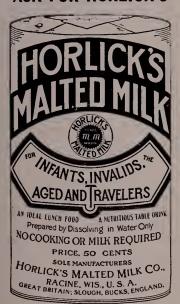


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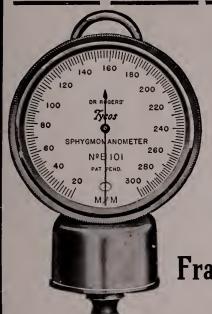
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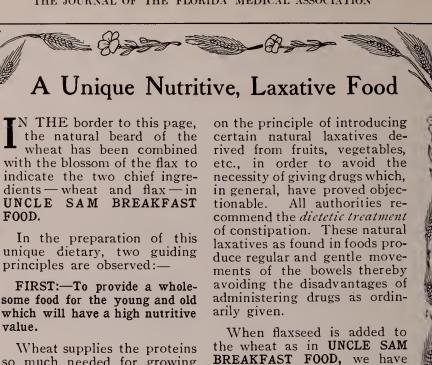
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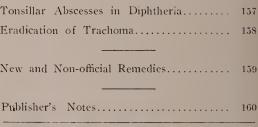
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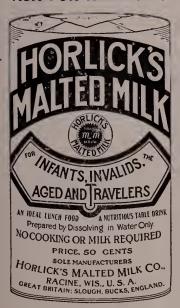
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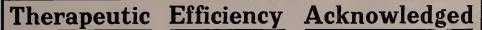
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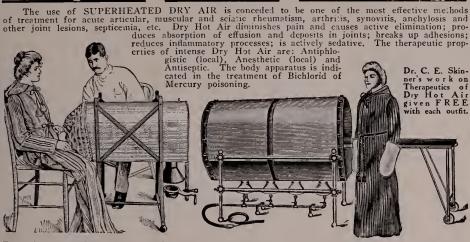
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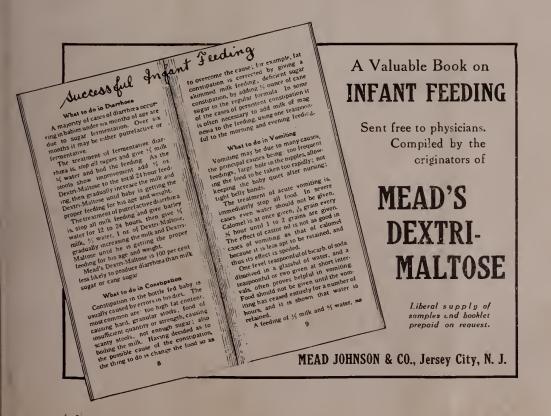
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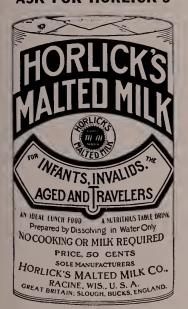


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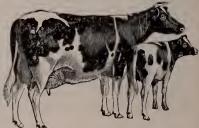
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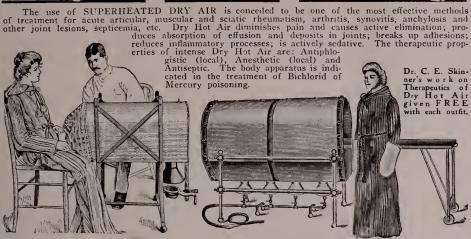
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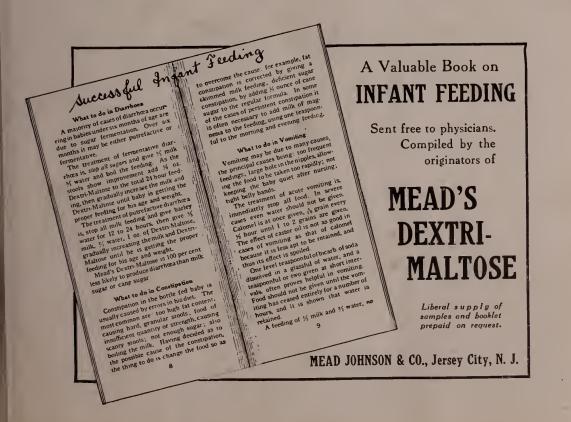
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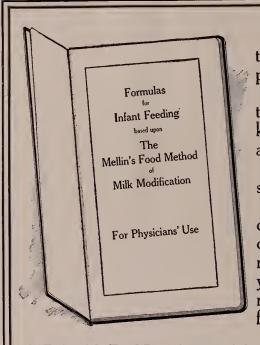
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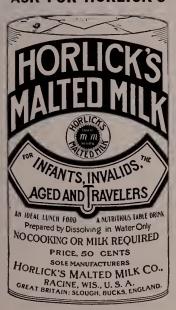


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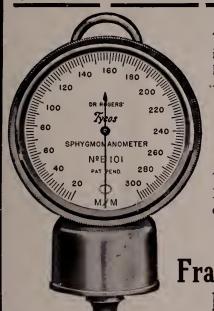
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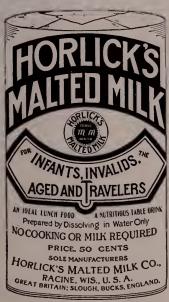


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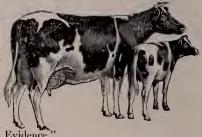
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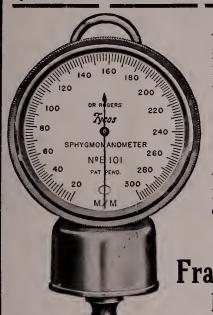
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The committee in charge of the program for the next meeting of the State Association is receiving responses to the form letters which were sent out several weeks ago, indicating a strong program. The returns, however, are not arriving as fast as the committee would like to have them, so this is just a gentle reminder to *you* to send in your title as soon as possible.

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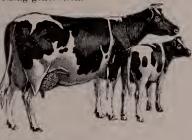
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Intestinal Stasis, Ptosis and Constipation

have assumed today an importance with the medical profession never before imagined. This is because the toxemia which may accompany these conditions, with its train of detrimental results, has been demonstrated, while the fact that cases may be treated successfully by the physician, is recognized.

It has been shown that Ptosis, Intestinal Stasis and Constipation do not necessarily occur together. Each may exist by itself, or any degree of combination of two or all may obtain. The essential matter is to prevent the toxemia by preventing an abnormal delay in the passage of material along the gastro-intestinal tract and by hindering the development of bacteria.

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St. Augustine and Jacksonville, Fla., April, 1916

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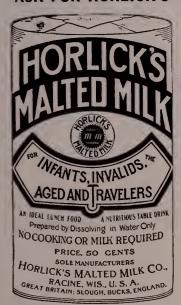


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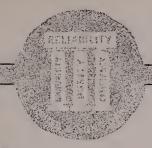
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Florida Medical Association

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VOLUME II

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Jan. 26, 1916, Mineral Wells, Texas: Give me name and address of firm handling second-hand

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March 3, 1916, Safety Harbor, Fla.: Please advise of reliable physician's supply house where I can

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